Maintenance and Service Guide

Compaq Presario 4900, 5000, & 5100 Series Computers

Product Description

Troubleshooting

Illustrated Parts Catalog

Removal & Replacement Procedures

Jumper & Switch Information

Specifications

See the Notice for copyright and trademark information, and the Preface for symbol conventions and Technician Notes.

Download ZIP file of complete MSG onto local hard drive.

This MSG will be periodically maintained and updated as needed.

To report a technical problem, contact your Regional Support Center or IM Help Center.

NOTICE

The information in this guide is subject to change without notice.

COMPAQ COMPUTER CORPORATION SHALL NOT BE LIABLE FOR TECHNICAL OR EDITORIAL ERRORS OR OMISSIONS CONTAINED HEREIN, NOR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE FURNISHING, PERFORMANCE, OR USE OF THIS MATERIAL.

This guide contains information protected by copyright. No part of this guide may be photocopied or reproduced in any form without prior written consent from Compaq Computer Corporation. © 1998 Compaq Computer Corporation. All rights reserved. Compaq, Presario Registered U. S. Patent and Trademark Office.

Microsoft, MS-DOS, and Windows are registered trademarks of Microsoft Corporation. Windows 95 is a trademark of Microsoft Corporation. The software described in this guide is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of the agreement. Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

Online Maintenance and Service Guide
Compaq Presario 4900, 5000, & 5100 Series Personal Computers

June 1998

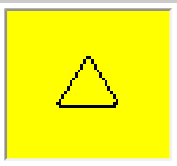
PREFACE

This *Maintenance and Service Guide* is a troubleshooting guide that can be used for reference when servicing the Compaq Presario 4900, 5000, & 5100 Series Personal Computers.

Compaq Computer Corporation reserves the right to make changes to the Compaq Presario 4900, 5000, & 5100 Series Personal Computers without notice.

Symbols

The following words and symbols mark special messages throughout this guide.

	WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.
	**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of data.
IMPORTANT:	Text set off in this manner presents clarifying information or specific instructions.
NOTE:	Text set off in this manner presents commentary, sidelights, or interesting points of information.

Technician Notes

	WARNING: Only authorized technicians trained by Compaq should repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, the user should not attempt to make repairs at the component level or to make modifications to any printed circuit board. Improper repairs can create a safety hazard. Any indications of component replacement or printed circuit board modifications may void any warranty.

Serial Number

When requesting information or ordering spare parts, the computer serial number should be provided to Compaq. The serial number can be found on the front right side of the chassis (between the CD/DVD/Zip drives and the drive door hinge), and on the rear of the computer above the power supply.

SHOW ME

Locating Additional Information

The following documentation is available to support this product:

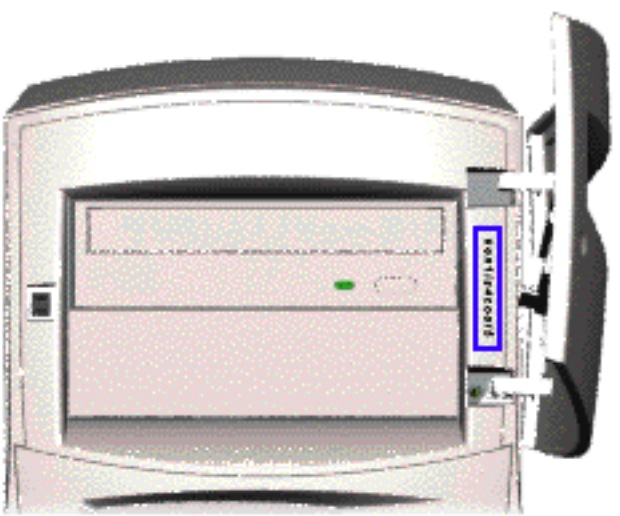
- Compaq Presario documentation set
- *Introducing Windows 95 Guide*
- Service Training Guides
- Compaq Service Advisories and Bulletins
- *Compaq QuickFind*
- *Compaq Service Quick Reference Guide*
- *Compaq Help Center*

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board compopnents
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Serial Number

The computer serial number should be provided to Compaq whenever requesting information or ordering spare parts. The serial number is located on the rear of the computer above the power supply, and also on the chassis between the CD/DVD/Zip drives and the drive door hinge.



DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Electrostatic Discharge

A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs. An electronic device exposed to electrostatic discharge (ESD) may not be affected at all and will work perfectly throughout a normal cycle. Or it may function normally for a while, then degrade in the internal layers, reducing its life expectancy.

Networks built into many integrated circuits provide some protection, but in many cases, the discharge contains enough power to alter device parameters or melt silicon junctions.

Generating Static

The table below shows the different amounts of static electricity generated by different activities .

	Relative Humidity		
Event	**10%**	**40%**	**55%**
Walking across carpet	35,000 V	15,000 V	7,500 V
Walking across vinyl floor	12,000 V	5,000 V	3,000 V
Motions of bench worker	6,000 V	800 V	400 V
Removing DIPS from plastic tubes	2,000 V	700 V	400 V
Removing DIPS from vinyl trays	11,500 V	4,000 V	2,000 V
Removing DIPS from Styrofoam	14,500 V	5,000 V	3,500 V
Removing bubble pack from PCBs	26,000 V	20,000 V	7,000 V
Packing PCBs in foam-lined box	21,000 V	11,000 V	5,000 V

NOTE: 700 volts can degrade a product!

Preventing Electrostatic Damage to Equipment

Many electronic components are sensitive to ESD. Circuitry design and structure determine the degree of sensitivity. The following proper packaging and grounding precautions are necessary to prevent damage:

- Protect all electrostatic parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic sensitive parts in their containers until they arrive at static-free stations.
- Place items on a grounded surface before removing them from their container.
- Always be properly grounded when touching a sensitive component or assembly.
- Place reusable electrostatic-sensitive parts from assemblies in protective packaging or conductive foam.

Use transporters and conveyors made of antistatic belts and metal roller bushings. Mechanized equipment used for moving materials must be wired to ground and proper materials selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

Preventing Damage to Drives

To prevent static damage to hard drives, use the following precautions:

- Handle drives gently, using static-guarding techniques.
- Store drives in the original shipping containers.
- Avoid dropping drives from any height onto any surface.
- Handle drives on surfaces that have at least one inch of shock-proof foam.
- Always place drives PCB assembly side down on the foam.

Grounding Methods

The method for grounding must include a wrist strap or a foot strap at a grounded workstation. When seated, wear a wrist strap connected to a grounded system. When standing, use footstraps and a grounded floor mat.

Static-Shielding Protection Levels			
Method	Antistatic Plastic	Carbon-Loaded Plastic	Metallized Laminate
Voltages	1,500	7,500	15,000

Grounding Workstations

To prevent static damage at the workstation, use the following precautions:

- Cover the workstation with approved static-dissipative material. Provide a wrist strap connected to the work surface and properly grounded tools and equipment.
- Use static-dissipative mats, heel straps, or air ionizers to give added protection.
- Handle electrostatic sensitive components, parts, and assemblies by the case or PCB laminate. Handle them only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.
- Turn off power and input signals before inserting and removing connectors or test equipment.
- Use fixtures made of static-safe materials when fixtures must directly contact dissipative surfaces.
- Keep work area free of nonconductive materials such as ordinary plastic assembly aids and Styrofoam.
- Use field service tools, such as cutters, screwdrivers, and vacuums, that are conductive.
- Use a portable field service kit with a static dissipative vinyl pouch that folds out of a work mat. Also use a wrist strap and a ground cord for the work surface. Ground the cord to the chassis of the equipment undergoing test or repair.

Grounding Equipment

Use the following equipment to prevent static electricity damage to the equipment:

Wrist Straps are flexible straps with a minimum of 1 megohm ±10% resistance to the ground cords. To provide proper ground, a strap must be worn snug against the skin. On grounded mats without banana-plug connectors, connect a wrist strap with alligator clips.

Heelstraps/Toestraps/Bootstraps can be used at standing workstations and are compatible with most types of boots and shoes. On conductive floors or dissipative floor mats, use them on both feet with a minimum of 1 megohm resistance between operator and ground. To be effective, the conductive strips must be worn in contact with the skin.

Recommended Materials and Equipment

Other materials and equipment that are recommended for use in preventing static electricity include:

- Antistatic tape
- Antistatic smocks, aprons, or sleeve protectors
- Conductive bins, and other assembly or soldering aids
- Conductive foam
- Conductive tabletop workstations with ground cord of 1 megohm of resistance
- Static dissipative table or floor mats with hard tie to ground
- Field service kits
- Static awareness labels
- Wrist straps and footwear straps providing 1 megohm ±10% resistance
- Material handling packages
- Conductive plastic bags
- Conductive plastic tubes
- Conductive tote boxes
- Metal tote boxes
- Opaque shielding bags
- Transparent metallized shielding bags
- Transparent shielding tubes

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Service Considerations

Listed below are some of the considerations that should be kept in mind during the disassembly and assembly of the computer.

Tool Requirements

- Phillips screwdriver
- Needle-nose pliers
- Flat-bladed screwdriver
- Compaq Utilities software

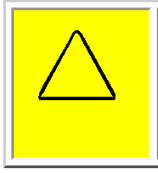
Screws

The screws used in these products are not interchangeable. If an incorrect screw is used during the reassembly process, it could cause damage to the unit. Compaq strongly recommends that all screws removed during the disassembly process be kept with the part that was removed, then returned to their proper locations.

IMPORTANT:	As each subassembly is removed from the computer, it should be placed away from the work area to prevent damage.

Cables and Connectors

Most cables used throughout the unit are *ribbon cables*. These must be handled with extreme care to avoid damage. Apply only the tension required to seat or unseat the cables during insertion or removal from the connector. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing the cables, and ensure that they are placed in such a way that they cannot be caught or snagged by parts being removed or replaced.

	**CAUTION:** When servicing these computers, ensure that cables are placed in their proper location during the reassembly process. Improper cable placement can cause severe damage to the unit.

Ribbon Cable Positions

CD or DVD drive
Creativity Action Center
Diskette drive
Hard drive
Zip drive

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Preparation for Disassembly

To prepare the computer for removal and replacement procedures, complete the following steps:

1. Remove any diskette, compact disc, or tape from the computer.
2. Turn off the computer and any peripheral devices that are connected to the computer.

CAUTION: The computer power switch should be turned off before you disconnect any cables.

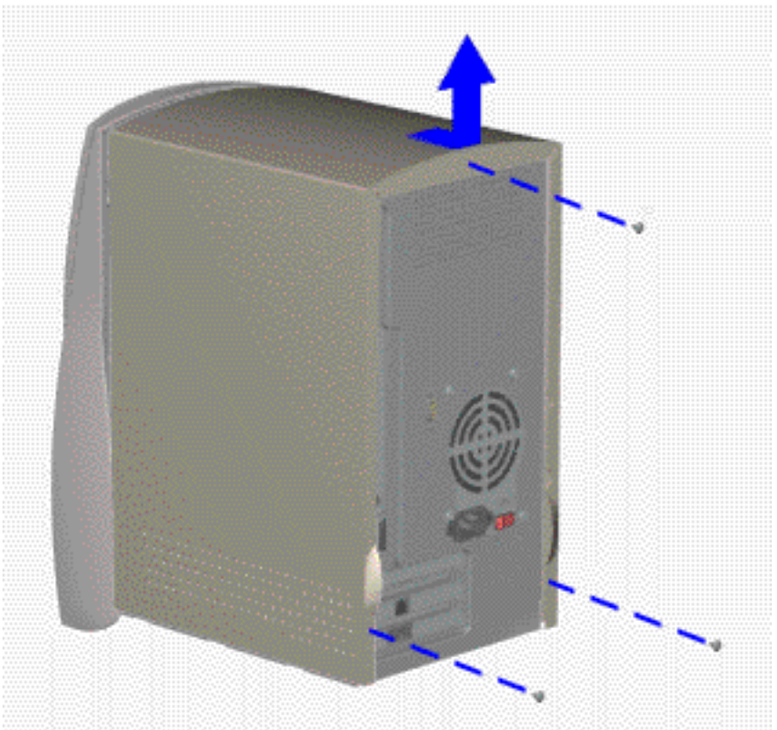
3. Disconnect the power cord from the electrical outlet, and then from the computer.
4. Disconnect all peripheral device cables from the computer.

IMPORTANT:	During disassembly, label each cable as you remove it. Be sure to note its position and routing.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Hood



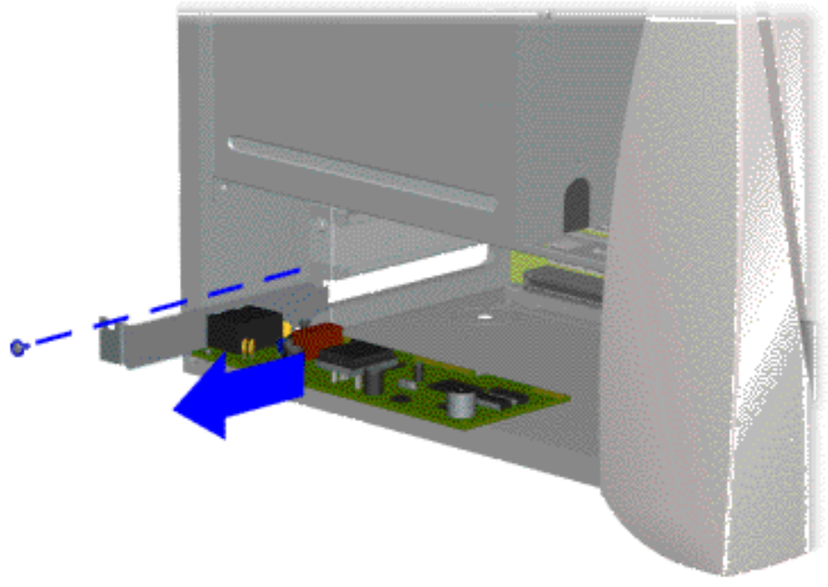
1. Perform the preparation procedures
2. Remove the three screws from the back of the computer
3. Grasp the handles on the bottom of the hood, pull back slightly, and lift the hood off the computer

To replace the hood, reverse this procedure.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Fax/modem



1. Perform preparation procedures.
2. Remove the hood.
3. Remove the screw holding the fax/modem bracket to the chassis and pull the fax/modem out of the slot.

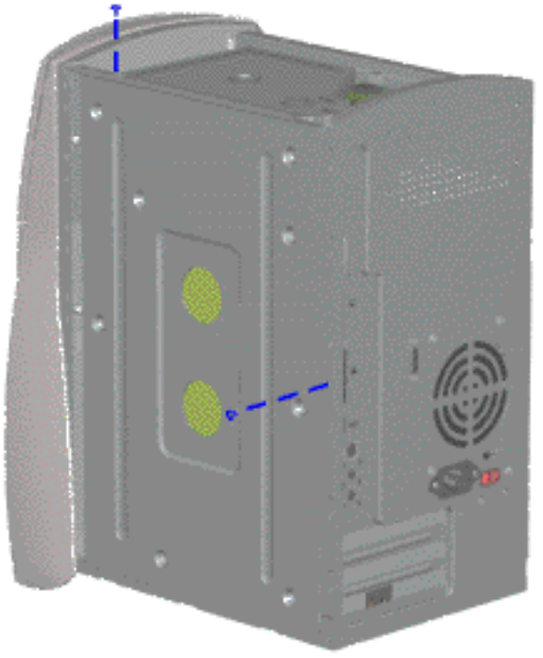
To replace the fax/modem, reverse this procedure.

IMPORTANT:	When replacing the fax/modem, download the latest software from SoftPaq. If QuickRestore is used, it may not have the 56K upgrade software included.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

System Board Bracket



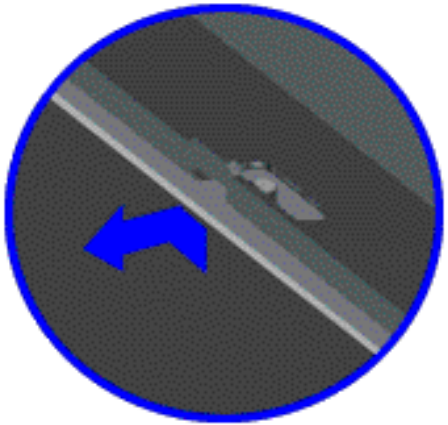
There are *ten* steps in this procedure.

1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem

CAUTION: The fax/modem must be removed before the system board bracket, or damage may occur to the system board.

4. Remove the screws from the top and the side of the system board bracket and chassis.

NEXT STEP

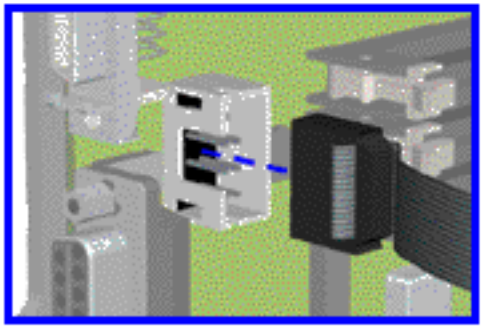


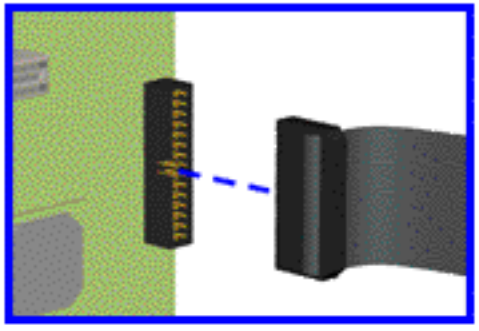
REMOVAL & REPLACEMENT

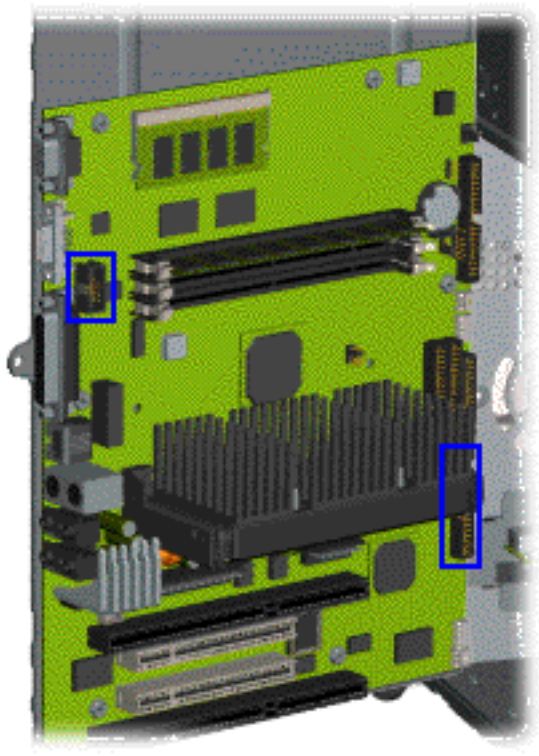
Removing the System Board Bracket, continued

5 Push the system board bracket forward and swing open.

NEXT STEP







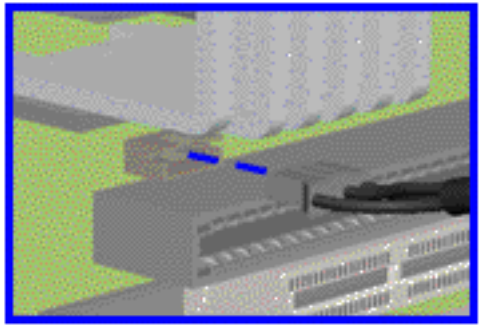
REMOVAL & REPLACEMENT

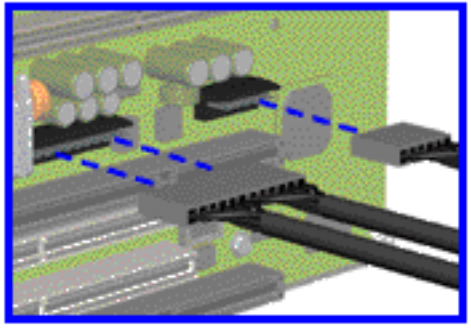
Removing the System Board Bracket, continued

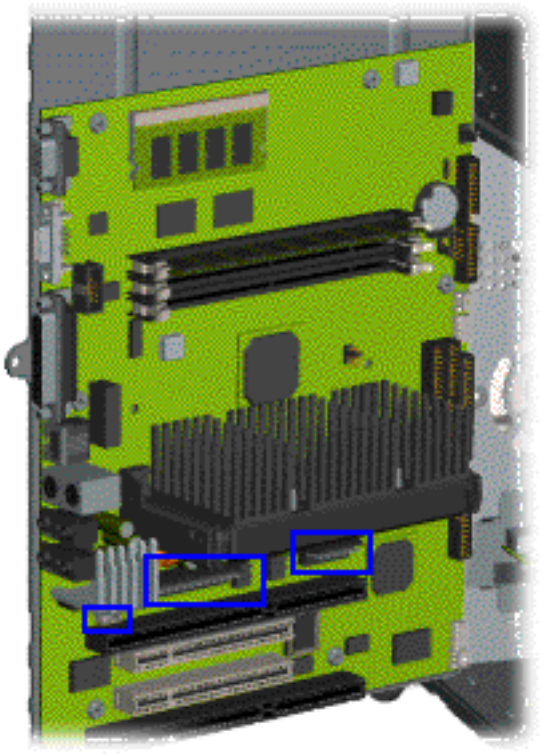
6 Disconnect the serial port cable (top) and the creativity action center cable (bottom) from the system board.

NOTE:	Your board may differ from the one shown.

NEXT STEP





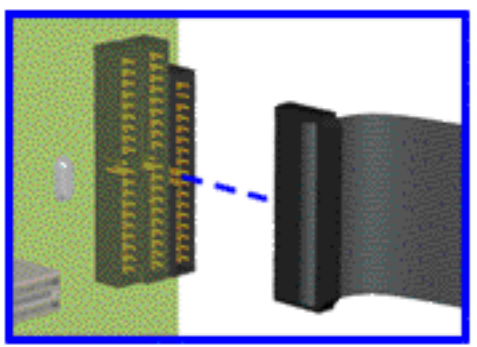


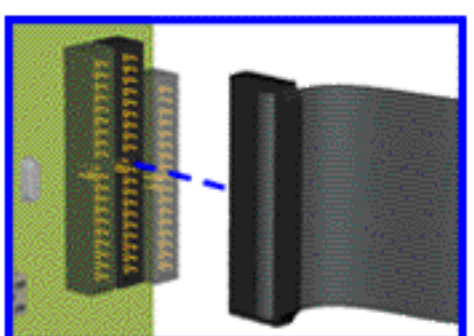
REMOVAL & REPLACEMENT

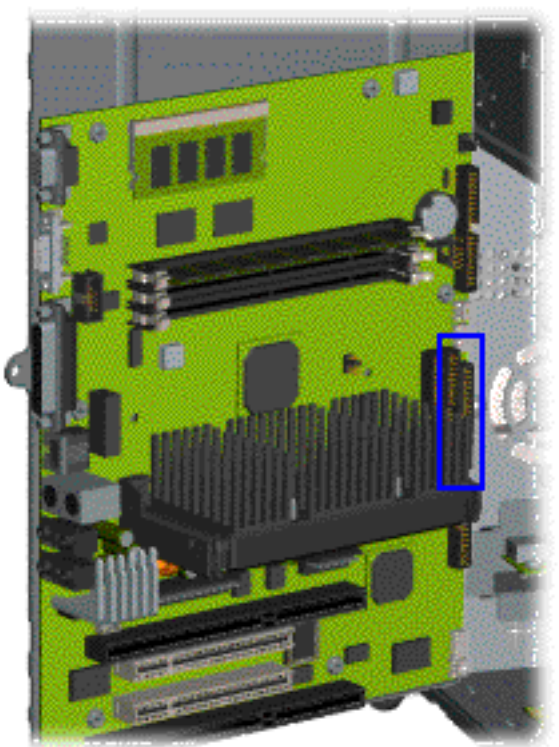
Removing the System Board Bracket, continued

7 Disconnect the audio and power cables.

NEXT STEP







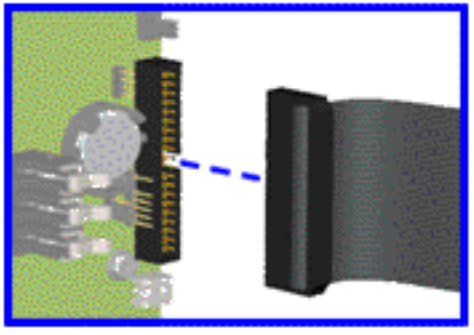
REMOVAL & REPLACEMENT

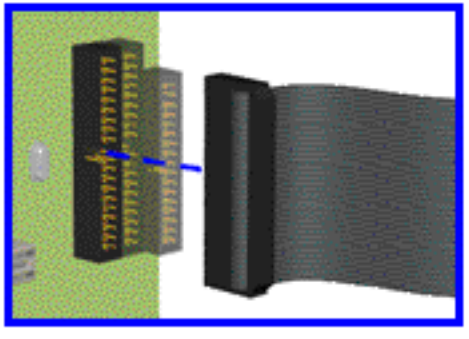
Removing the System Board Bracket, continued

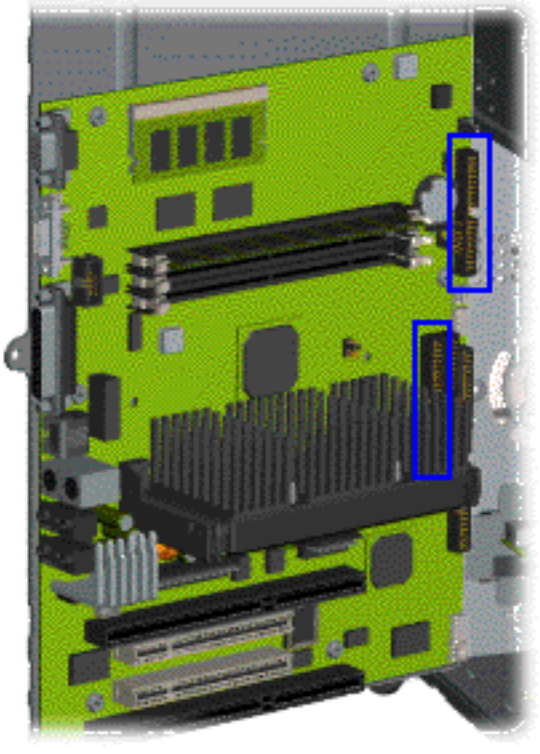
8 Disconnect the diskette drive and hard drive cables.

NEXT STEP

Home | Product Description | Removal & Replacement | Troubleshooting | Jumper & Switch Information | Illustrated Parts Catalog | Specifications





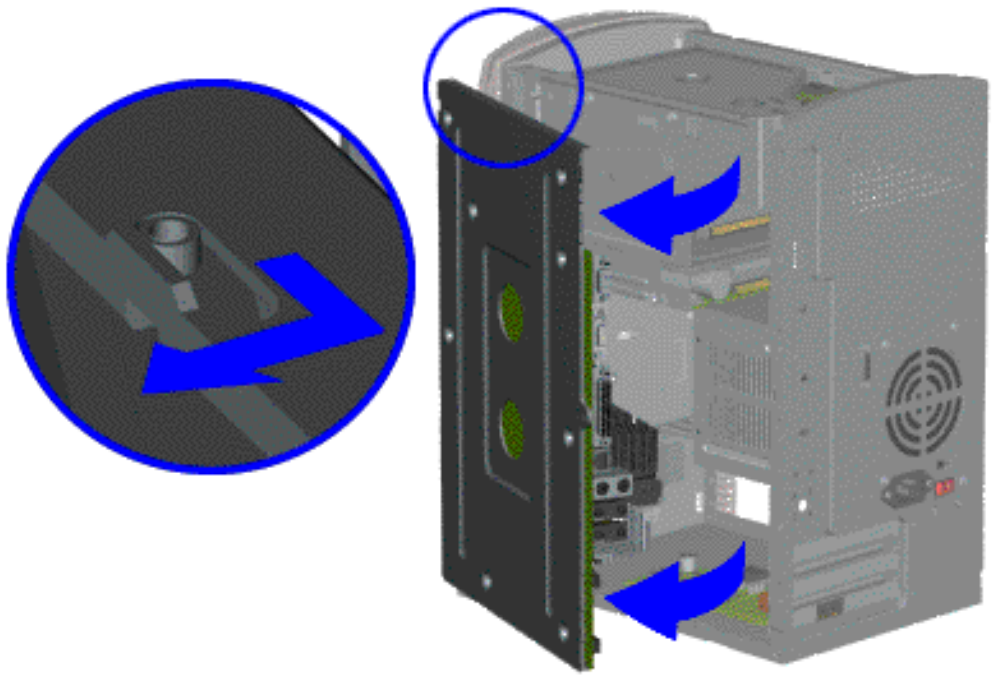


REMOVAL & REPLACEMENT

Removing the System Board Bracket, continued

9 Disconnect the Zip and CD/DVD drive cables.

NEXT STEP



REMOVAL & REPLACEMENT

Removing the System Board Bracket, continued

10 Slide the system board bracket back at an angle, lining up the pins in the top and bottom with the hinge opening, then pull the system board bracket out of the chassis.

END OF SEQUENCE

To replace the system board bracket, reverse this procedure.

CAUTION: When replacing the system board bracket, ensure the fingers of the I/O bracket are properly aligned to prevent bending the fingers. Bending the bracket fingers may damage the system board.

Return to section index

REMOVAL & REPLACEMENT PROCEDURES - INDEX PAGE

This section provides general service information for Compaq 4900, 5000, & 5100 Series Personal Computers. Adherence to the procedures and precautions described in this section is essential for safe and proper service.

Electrostatic discharge

Service considerations

Preparation for disassembly

Serial number

Hood

Fax-modem

Serial port assembly

Mass storage devices
- CD or DVD drive
- Diskette drive
- Hard drive
- Zip drive

System board bracket

System board components
- battery
- cache (4910 model only)
- memory module
- processor
- I/O panel
- system board
- video expansion module

Power supply

Front bezel

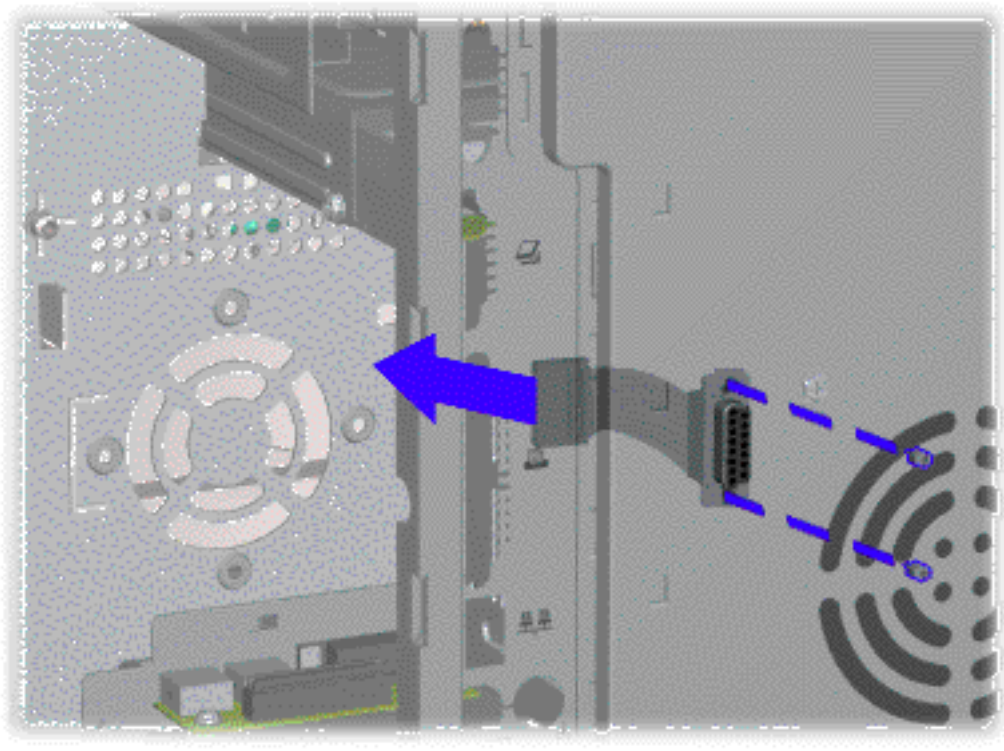
Instant On button board

Creativity Action Center

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Serial Port Cable Assembly



1 Perform preparation procedures

2 Remove the hood

3 Remove the fax/modem

CAUTION: Remove the fax/modem before removing the system board bracket, or the system board may be damaged.

4 Open the system board bracket

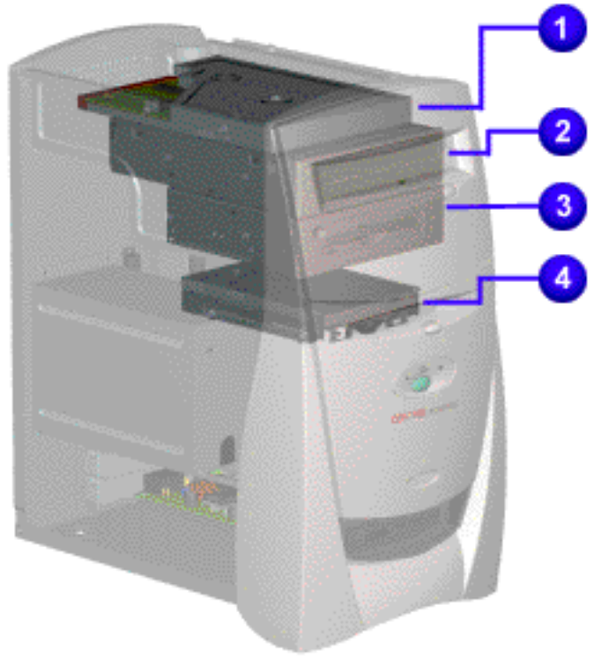
5 Remove the two screwlocks that secure the serial port to the chassis and pull the serial port cable assembly out of the chassis

To replace the serial port, reverse this procedure.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Mass Storage Devices - Index Page



1 3.5" Hard drive or 5.25" Hard drive

2 CD or DVD drive

3 Zip drive

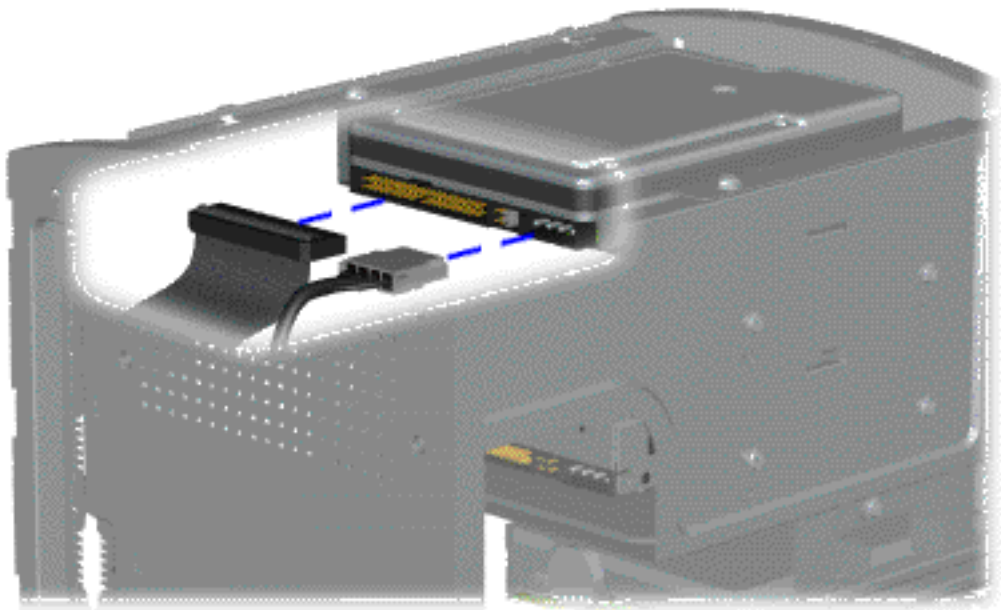
4 Diskette drive

3.5" Diskette Drive
3.5" Hard drive
5.25" Hard drive
CD or DVD drive
Zip drive
Mass storage devices index page

REMOVAL & REPLACEMENT

Mass Storage Devices

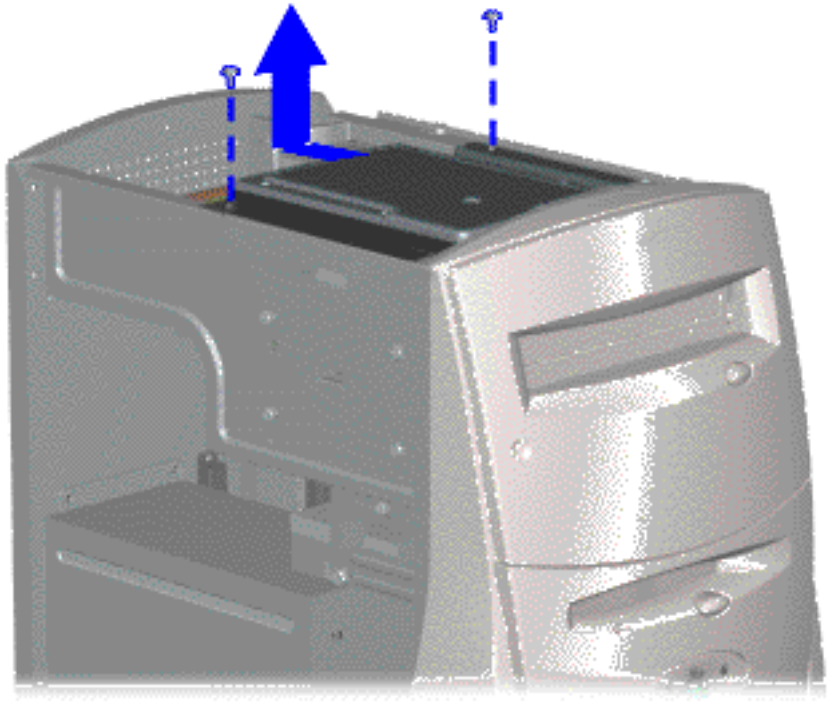
3.5" Hard Drive



There are *six* steps in this procedure.

1. Perform preparation procedures.
2. Remove the hood.
3. Disconnect the signal and power cables from the hard drive.

NEXT STEP



REMOVAL & REPLACEMENT

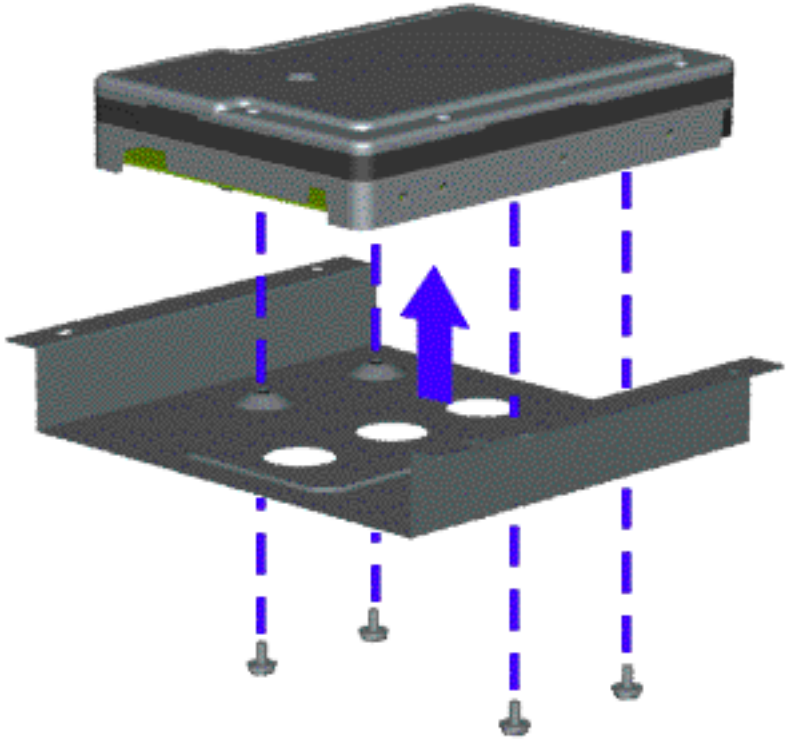
Mass storage devices

3.5" Hard Drive, continued

4 Remove the two screws from the top of the hard drive bracket and chassis.

5 Slide the hard drive bracket straight back and up out of the chassis.

NEXT STEP



REMOVAL & REPLACEMENT

Mass Storage Devices

3.5" Hard Drive, continued

6 Remove the four screws at the bottom of the hard drive bracket to release the hard drive.

END OF PROCEDURE

To replace the 3.5-inch hard drive, reverse this procedure.

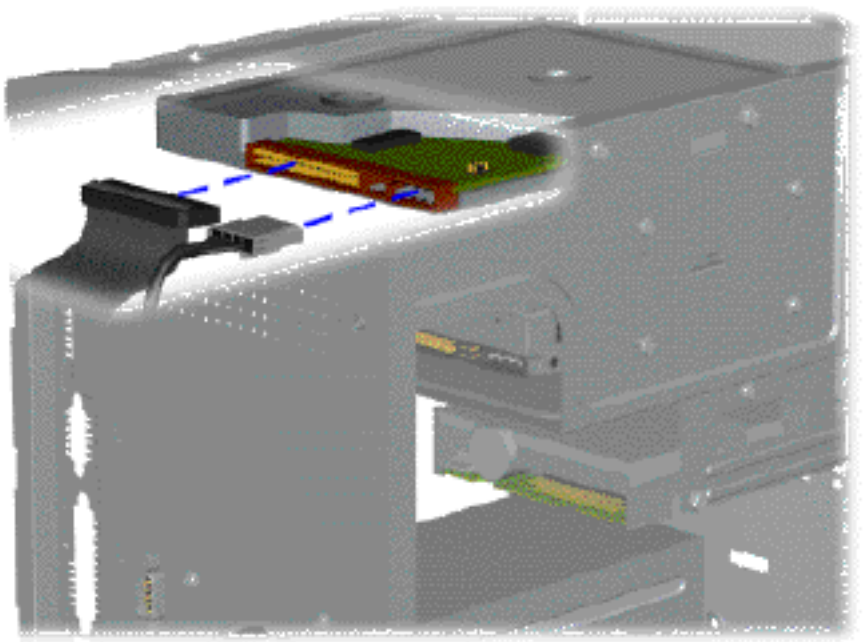
Return to index page

3.5" Diskette Drive
3.5" Hard drive
5.25" Hard drive
CD or DVD drive
Zip drive
Mass storage devices index page

REMOVAL & REPLACEMENT

Mass Storage Devices

5.25" Hard Drive



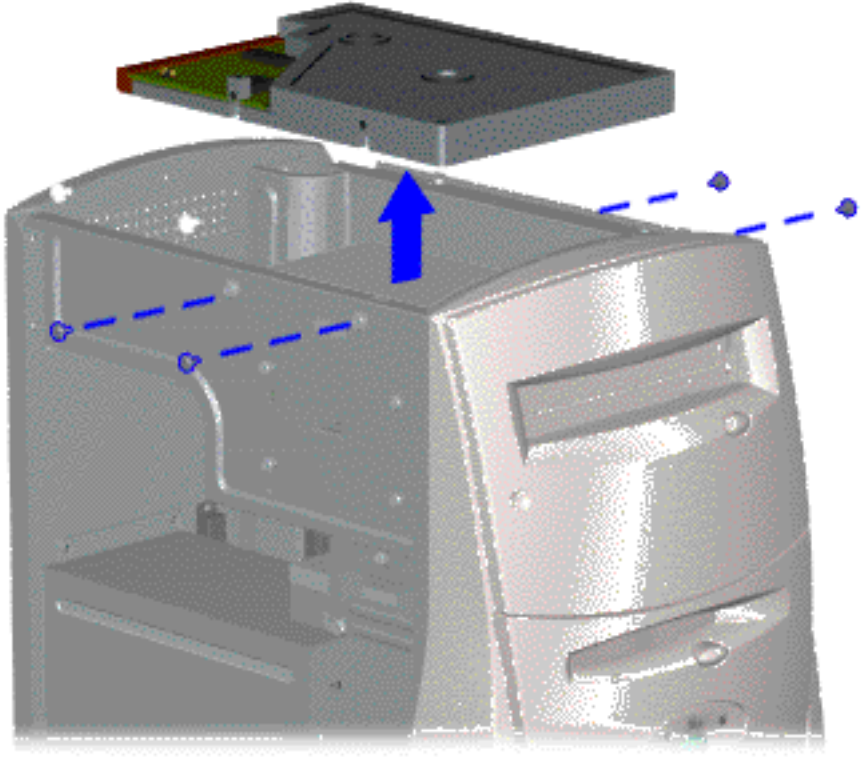
There are *seven* steps in this sequence.

1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem

CAUTION: The fax/modem must be removed before the system board bracket, or the system board may be damaged.

4. Open the system board bracket
5. Disconnect the signal and power cables from the hard drive.

NEXT STEP



REMOVAL & REPLACEMENT

Mass Storage Devices

5.25" Hard Drive

6 Remove the four screws from the sides of the hard drive.

7 Lift the hard drive straight out of the chassis.

END OF SEQUENCE

To replace the hard drive, reverse this procedure.

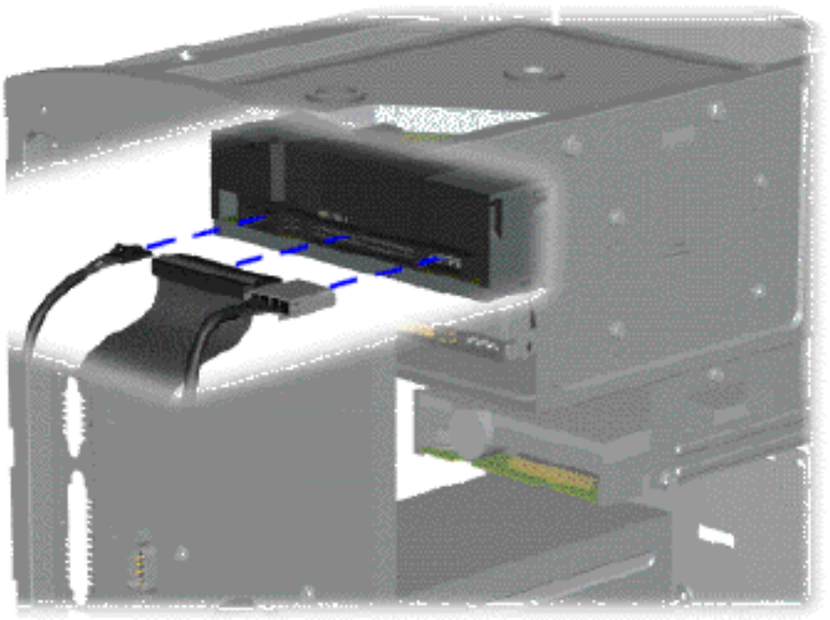
Return to index page

3.5" Diskette drive
3.5" Hard drive
5.25" Hard drive
CD or DVD drive
Zip drive
Mass storage devices index page

REMOVAL & REPLACEMENT

Mass Storage Devices

CD or DVD Drive



NOTE:	Click here to see how to remove a CD or DVD that has jammed in the drive.

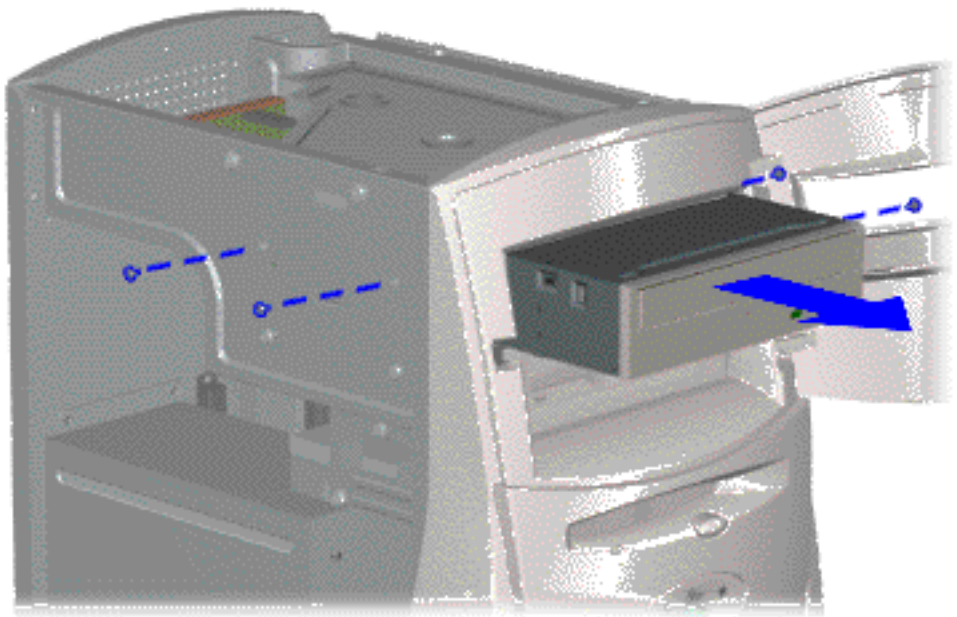
To remove the CD or DVD drive, complete the following *seven* steps:

1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem

	CAUTION: If the fax/modem is not removed before the system board bracket, damage may occur to the system board.

4. Open the system board bracket
5. Disconnect the signal, power, and audio cables from the CD or DVD drive

NEXT STEP



REMOVAL & REPLACEMENT

Mass Storage Devices

CD or DVD Drive, continued

6 Remove the four screws from the sides of the CD or DVD drive

7 Pull the CD or DVD drive straight out of the front of the chassis

END OF SEQUENCE

To replace the CD or DVD drive, reverse this procedure.

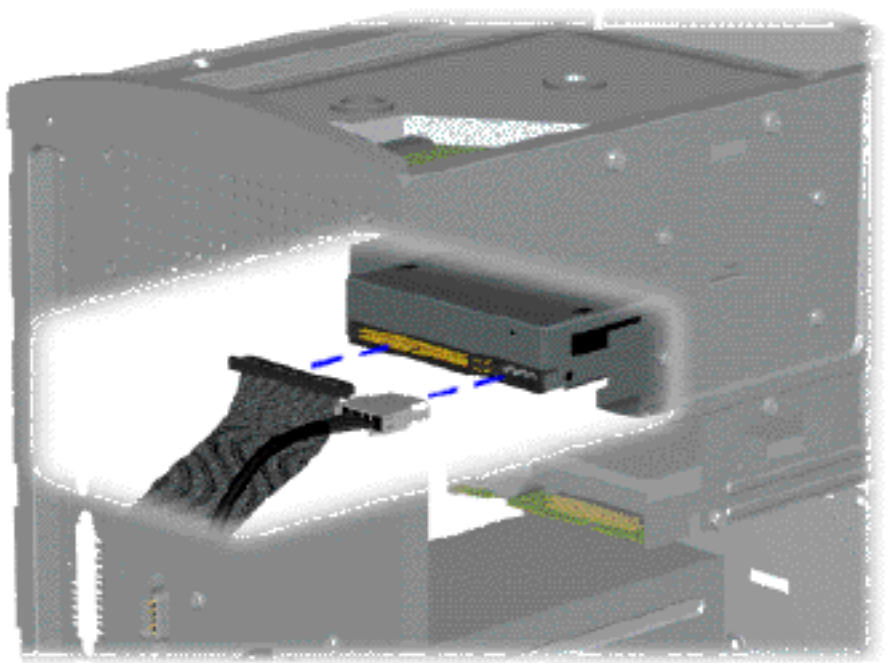
Return to section index

3.5" Diskette drive
3.5" Hard drive
5.25" Hard drive
CD or DVD drive
Zip drive
Mass storage devices index page

REMOVAL & REPLACEMENT

Mass Storage Devices

Zip Drive



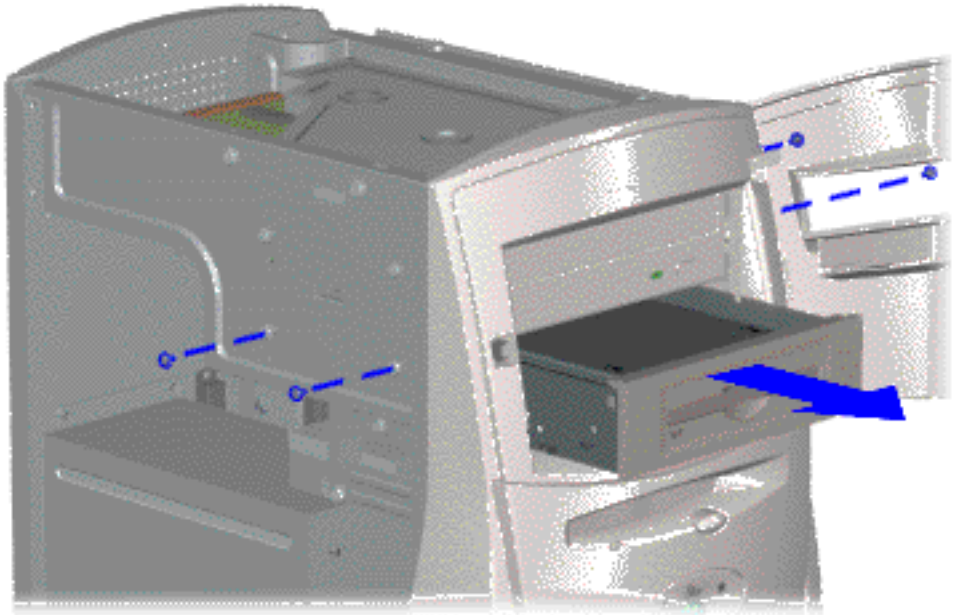
There are *eight* steps in this sequence.

1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem

CAUTION: If the fax/modem is not removed before the system board bracket, damage may occur to the system board.

4. Open the system board bracket
5. Disconnect the signal and power cables from the Zip drive.

NEXT STEP



REMOVAL & REPLACEMENT

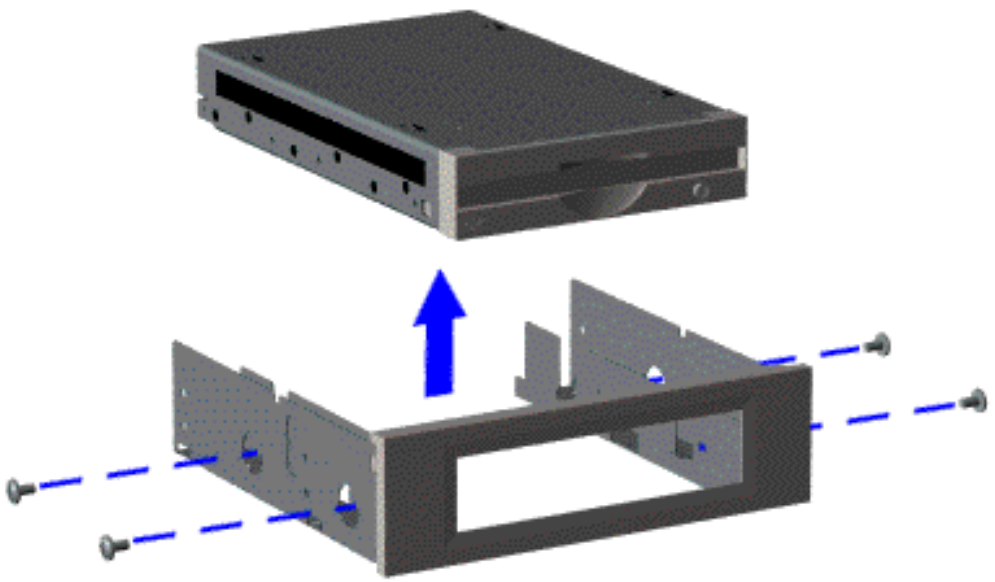
Mass Storage Devices

Zip Drive, continued

6 Remove the four screws holding the Zip drive in the chassis

7 Slide the Zip drive out the chassis

NEXT STEP



REMOVAL & REPLACEMENT

Mass Storage Devices

Zip Drive, continued

8 Remove the four screws holding the Zip drive to the bracket

END OF PROCEDURE

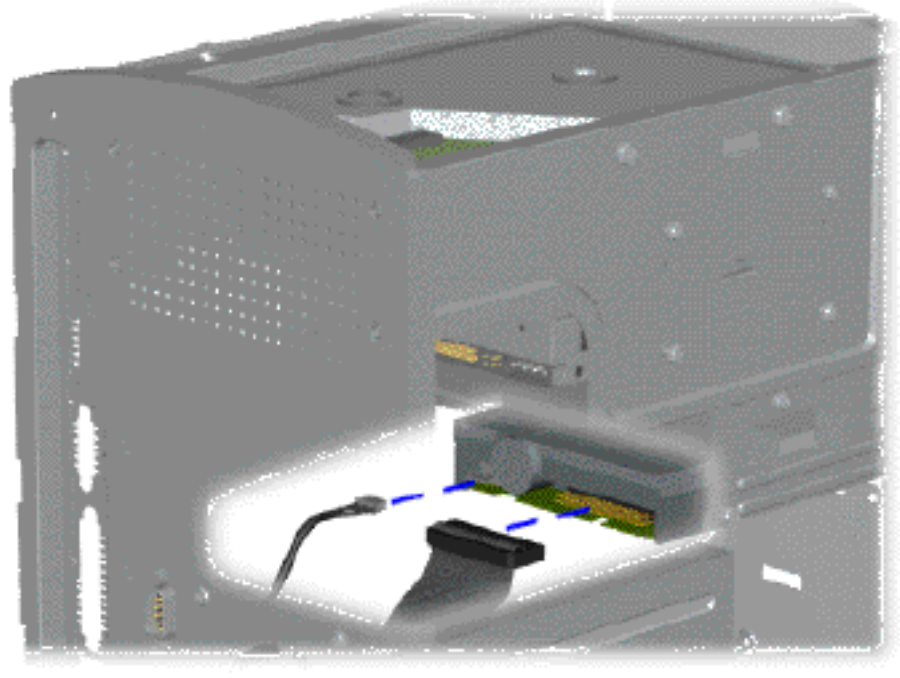
Return to index page

3.5" Diskette drive
3.5" Hard drive
5.25" Hard drive
CD or DVD drive
Zip drive
Mass storage devices index page

REMOVAL & REPLACEMENT

Mass Storage Devices

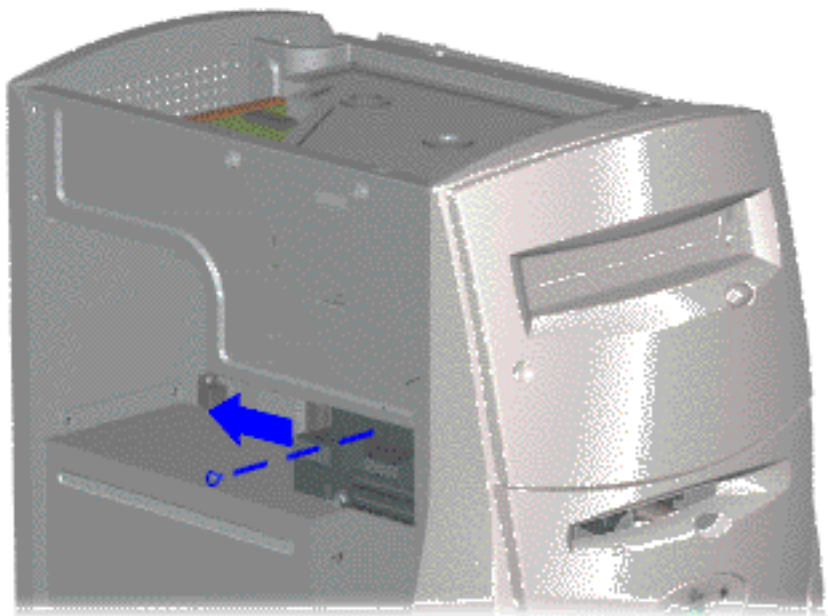
Diskette Drive



There are *five* steps in this procedure.

1. Perform the preparation procedures.
2. Remove the hood.
3. Disconnect the signal and power cables from the diskette drive.

NEXT STEP



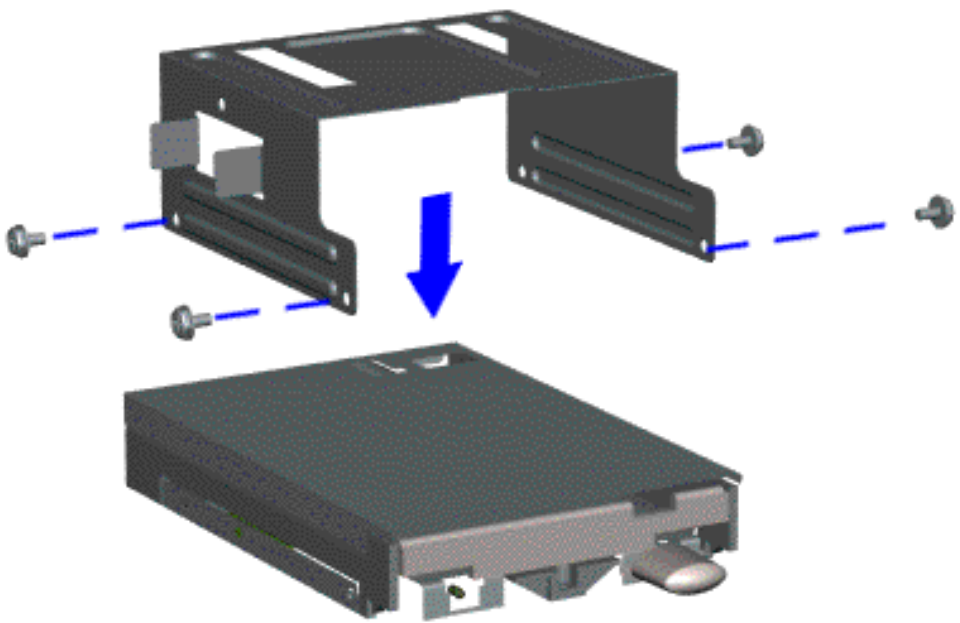
REMOVAL & REPLACEMENT

Mass Storage Devices

Diskette Drive, continued

4 Remove the screw holding the diskette drive bracket to the chassis, then grasp the tab and pull the diskette drive straight back out of the chassis.

NEXT STEP



REMOVAL & REPLACEMENT

Mass Storage Devices

Diskette Drive, continued

5 Remove the four screws from the sides of the diskette drive bracket to release the diskette drive from the bracket.

END OF SEQUENCE

To replace the diskette drive, reverse this procedure.

Return to section index

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

System Board Components - Index Page

Cache (4910 model only)

Heat sink clip

I/O panel

Memory module

Processor & goalposts: AMD K6 (4900 series)
Celeron (5000 & 5100 series)
Pentium II (5000 & 5100 series)

RTC battery

System board

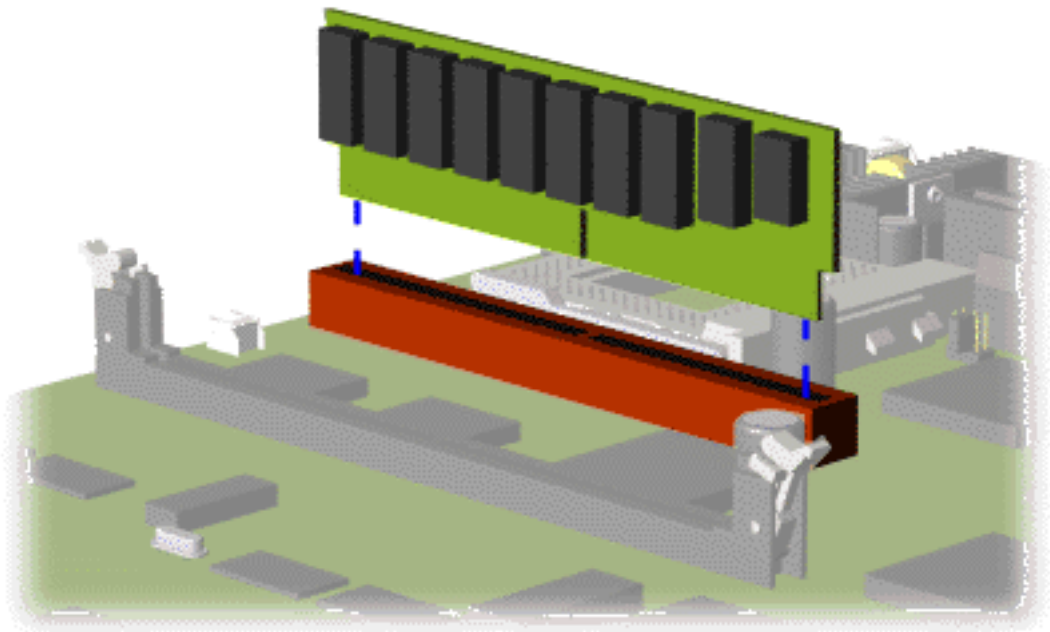
Video expansion module

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Removing the Cache (4910 Model only)



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Open the system board bracket
5. Gently pull out the cache from the socket on the system board

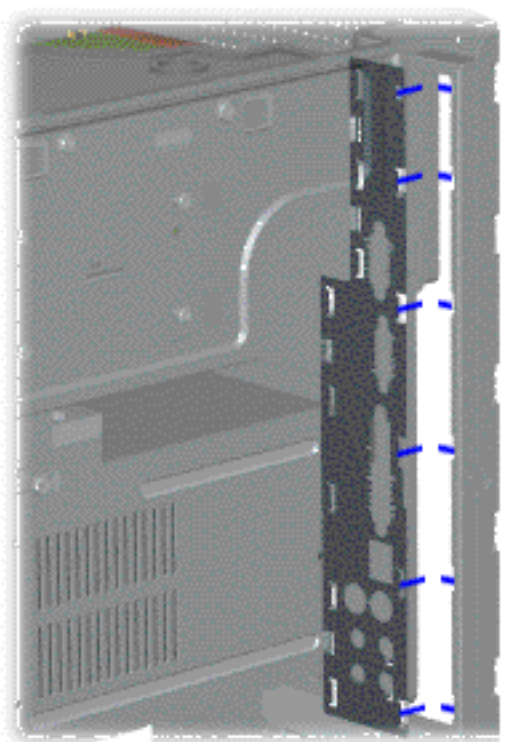
To replace the cache, reverse this procedure.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

I/O Panel



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Remove the system board bracket
5. Gently push the I/O panel into the chassis from the rear of the chassis and remove

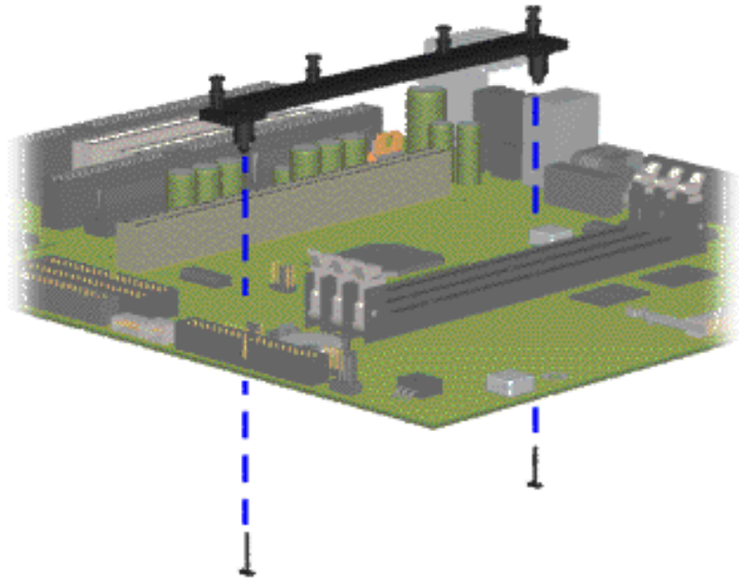
To replace the I/O panel, reverse this procedure.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Removing the Heat Sink Clip (on selected models)



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax-modem
4. Remove the system board bracket
5. Remove the processor
6. Remove the system board and separate it from the bracket
7. Locate the two inserts under the system board that secure the heat sink clip and unplug from the system board
8. Remove the heat sink clip from the system board

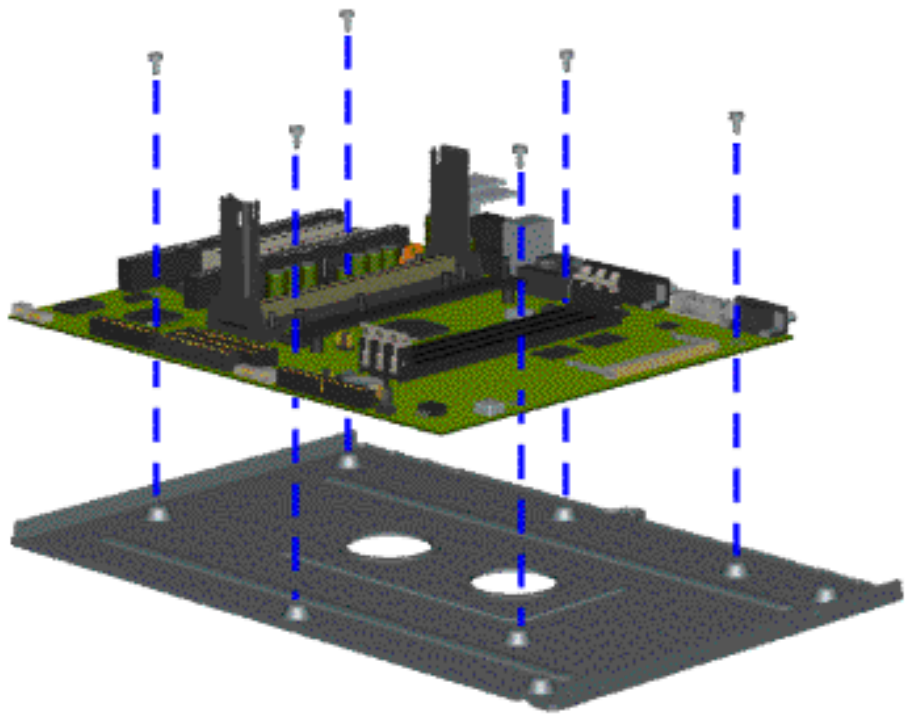
To replace the heat sink clip, reverse this procedure.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

System Board



1 Perform preparation procedures

2 Remove the hood

3 Remove the fax/modem

4 Remove the system board bracket

5 Remove the processor

6 Remove the memory module

7 Remove the video expansion module

8 Remove the six screws from the system board and separate it from the bracket

To replace the system board, reverse this procedure.

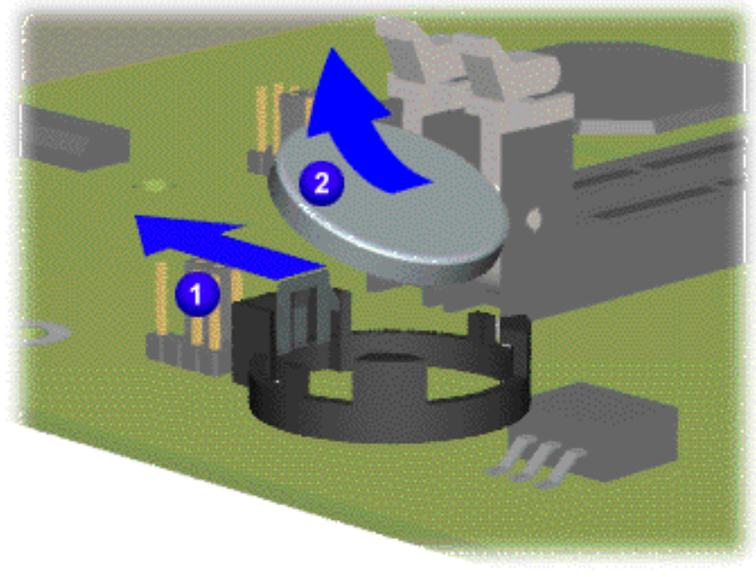
NOTE:	The system board spare part kit does not include the processor, cache, DIMM, or video expansion module. The components must be transferred from the old system board to the new system board.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Battery



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Remove the system board bracket
5. Locate the RTC battery
6. Push out the socket levers (1) and slide the RTC battery out of the socket (2)

To replace the RTC battery, reverse this procedure.

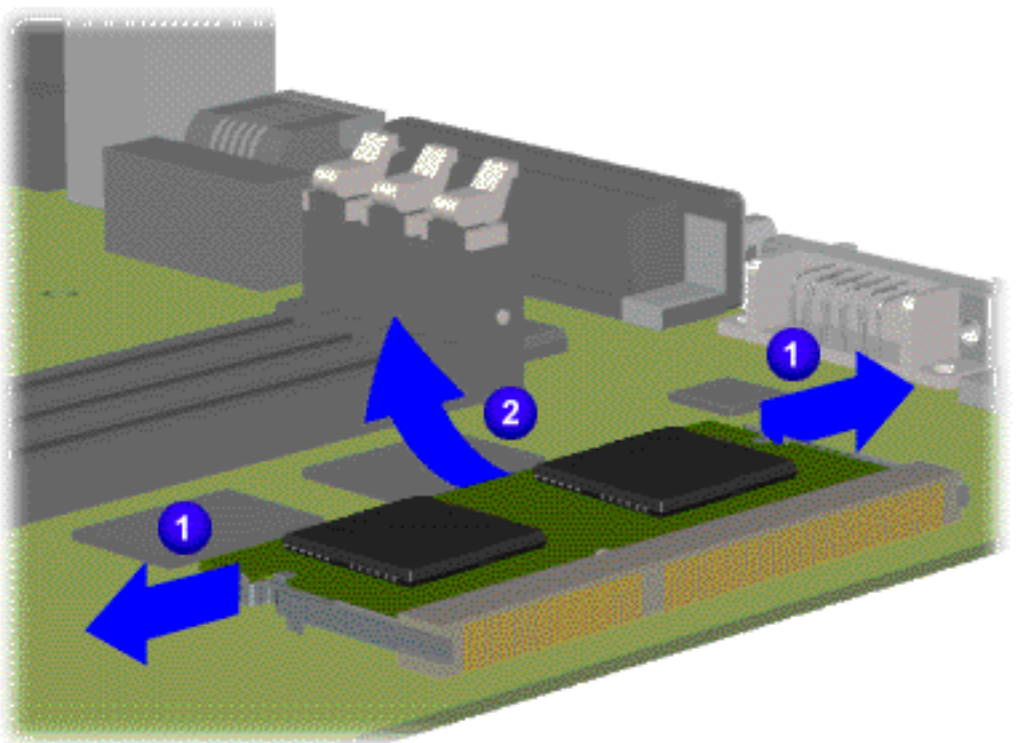
WARNING: The clock/CMOS lithium battery may explode if mistreated. Do not abuse. Use only replacement batteries supplied by Compaq Computer Corporation.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Video Expansion Module



1 Perform preparation procedures

2 Remove the hood

3 Remove the fax/modem

4 Remove the system board bracket

5 Pull out the tabs on the sides of the socket (1) and unplug the video expansion module from the system board (2)

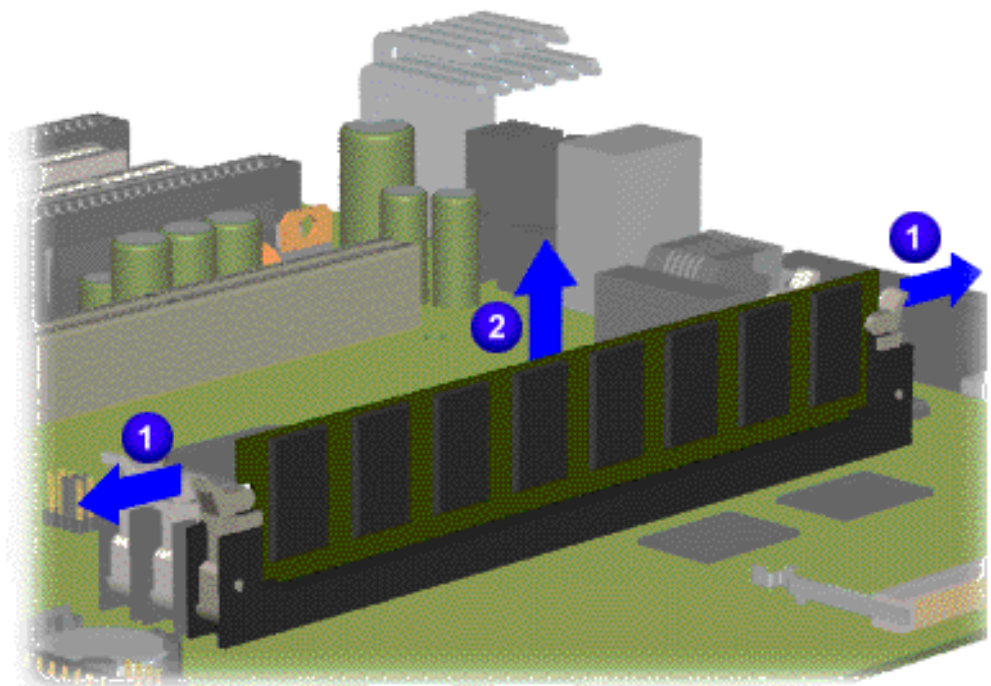
To replace the video expansion module, reverse this procedure.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Memory Module (DIMM)



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Remove the system board bracket
5. Release the end latches of the socket (1) and unplug the DIMM from the system board (2)

To replace the DIMM, reverse this procedure.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
Cache
System board components index page

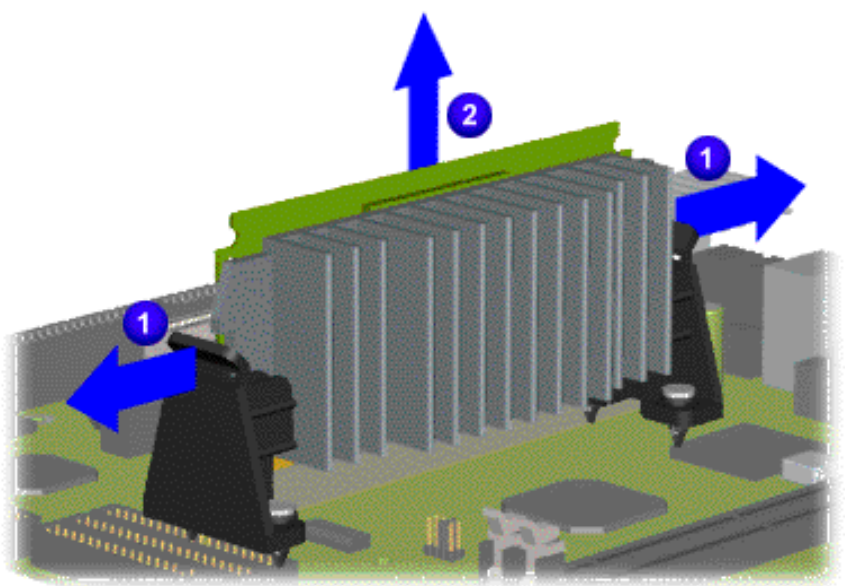
REMOVAL & REPLACEMENT

System Board Components

Processor & Goalposts (5000 & 5100 Series boards)

This page shows the removal and replacement procedure for a Celeron processor. A Pentium II processor may also be used on 5000 and 5100 series boards (it is standard on the 5030-5150 series boards). Click this link for the Pentium II removal/replacement procedure.

To see how to remove/replace the processor from a 4900 Series board, click this link: AMD K6.



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Open the system board bracket
5. Locate the Celeron processor
6. Open the top lever of the heat sink clip to release the heat sink (1)
7. Unplug the processor from the system board and slide out from the "goalposts" (2)

To see how to remove the goalposts, click this link.

To replace the Celeron processor, reverse the procedure above.

IMPORTANT:	Ensure that the processor is properly aligned in the goal posts before plugging it into the system board.

△	**CAUTION:** Before installing a new processor, see *Jumper and Switch Information* to reset the jumpers for the processor. If the processor is installed with the incorrect jumper settings, the processor and system board may be damaged.

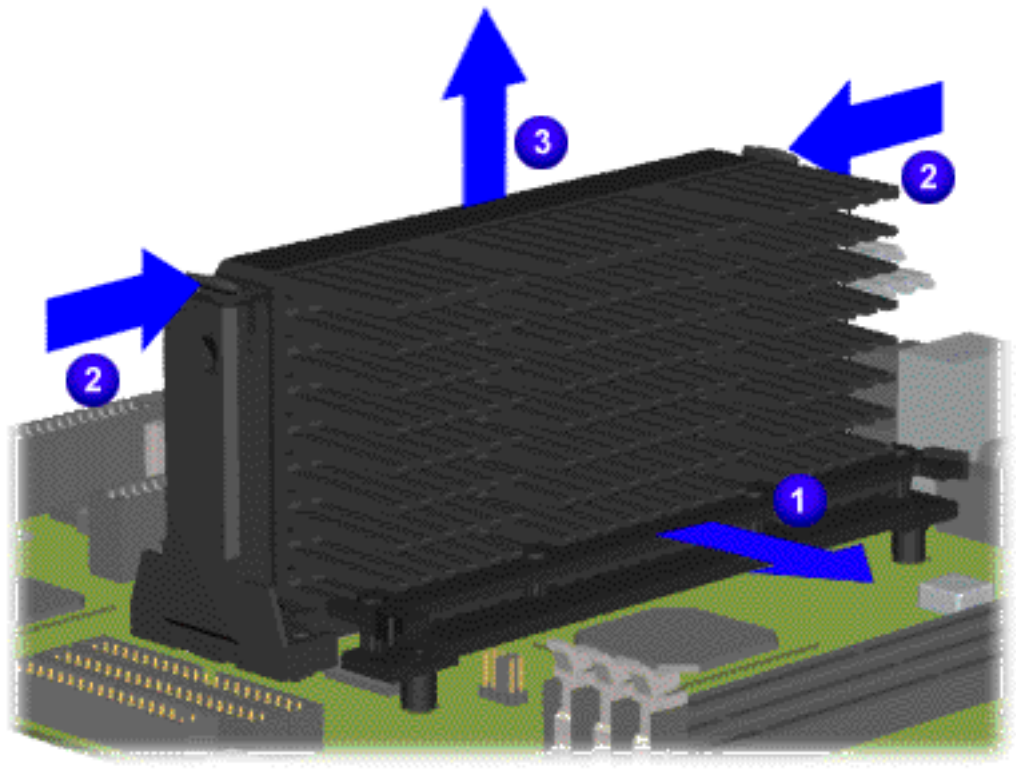
Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Processor & Goalposts (5000 & 5100 Series boards)

This page shows the removal and replacement procedure for a Pentium II processor.



1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Open the system board bracket
5. Locate the Pentium II processor
6. If necessary, open the top lever of the heat sink clip to release the heat sink (1)
7. Push in the release tabs on the ends of the processor "goalposts" (2)
8. Unplug the processor from the system board and slide out of the goalposts (3)

To see how to remove the goalposts, click this link.

If your goalposts are different from those illustrated, you may need to click on this link instead:

Alternative goalposts

To replace the Pentium II processor, reverse the procedure above.

IMPORTANT:	Ensure that the processor is properly aligned in the goalposts before plugging it into the system board.

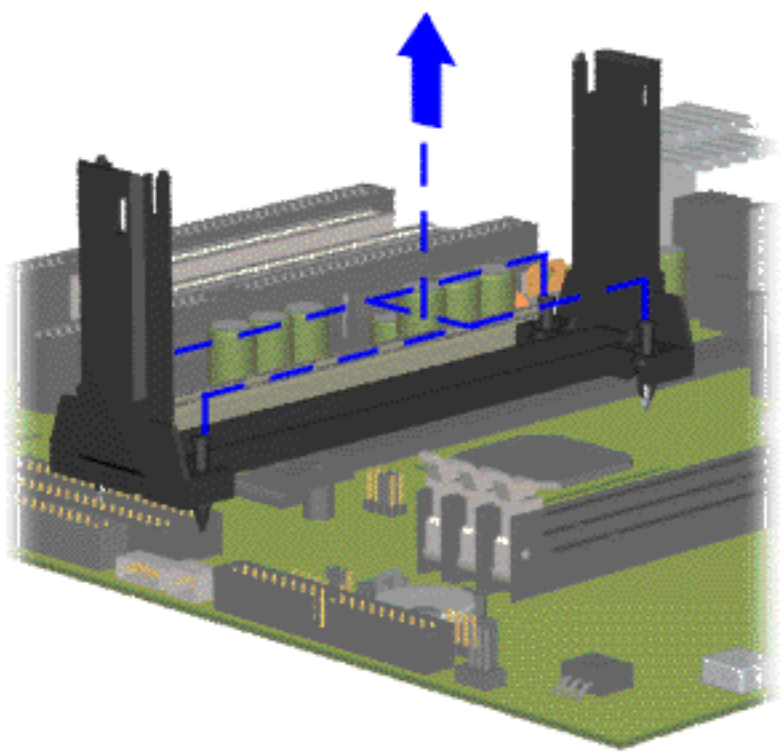
CAUTION: Before installing a new processor, see *Jumper and Switch Information* to reset the jumpers for the processor. If the processor is installed with the incorrect jumper settings, the processor and system board may be damaged.

Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Goalposts (Pentium II)



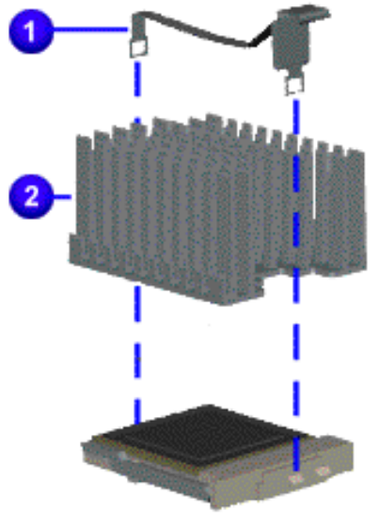
To remove the goalposts, remove the pushpins that secure the goalposts to the system board, then lift the goalposts off the board.

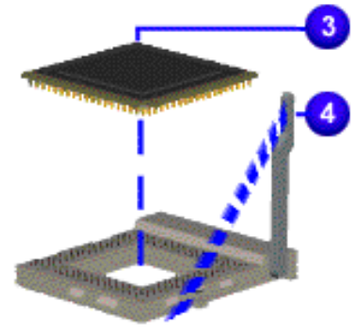
Processor & goalposts
Memory module
Video memory
Battery
System board
Heat sink clip
I-O panel
System board components index page

REMOVAL & REPLACEMENT

System Board Components

Processor - 4900 Series





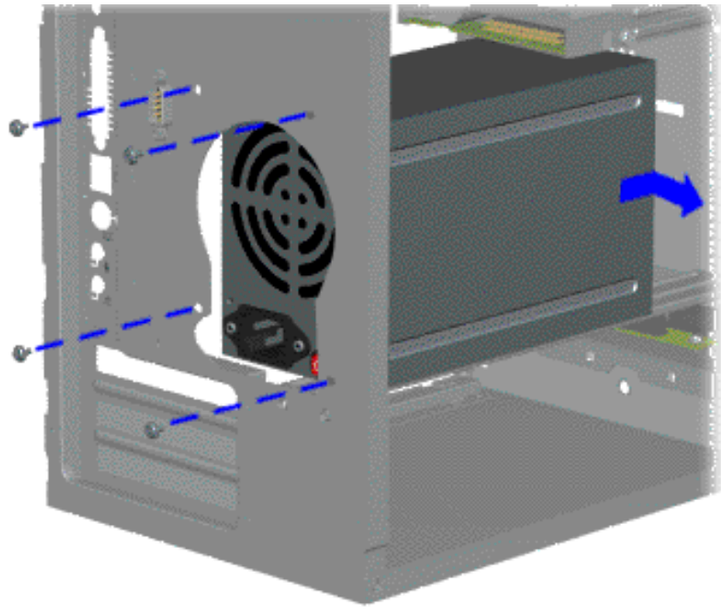
1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Open the system board bracket
5. Locate the AMD K6 processor
6. Remove the clip 1 from the heat sink 2
7. Lift up the ZIF socket handle 4 and lift the heat sink 2 and processor 3 out of the socket

To reinstall the AMD K6 processor, rub a thermal transfer crayon on the bottom of the heatsink, then reverse the steps above. (The thermal transfer crayon replaces the thermal pad used with earlier K6 processors.)

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board components
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Power Supply



1 Perform preparation procedures

2 Remove the hood

3 Remove the fax/modem

4 Remove the system board bracket

5 Disconnect the power cables to these mass storage devices:

- 3.5" hard drive or 5.25" hard drive
- CD or DVD drive
- Zip drive
- diskette drive

6 Remove the four screws that secure the power supply to the rear of the chassis

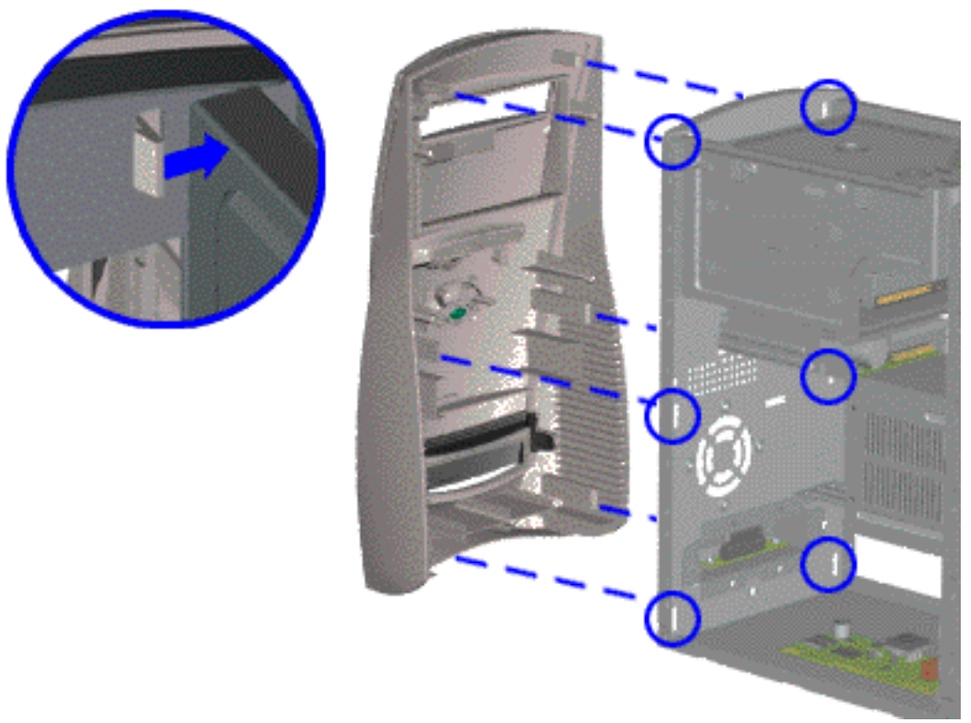
7 Slide the power supply back and remove from the chassis.

To replace the power supply, reverse this procedure.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Front Bezel



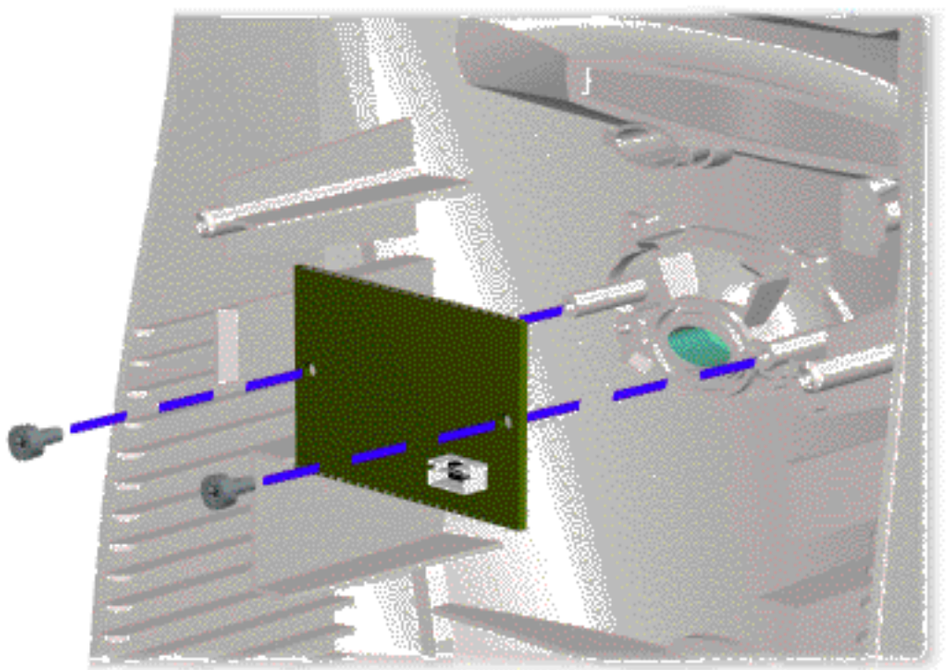
1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Remove the system board bracket
5. Release the latches at the bottom, middle, and top of the front bezel, then remove the front bezel from the chassis.

To replace the front bezel, reverse this procedure.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Instant On Button Board



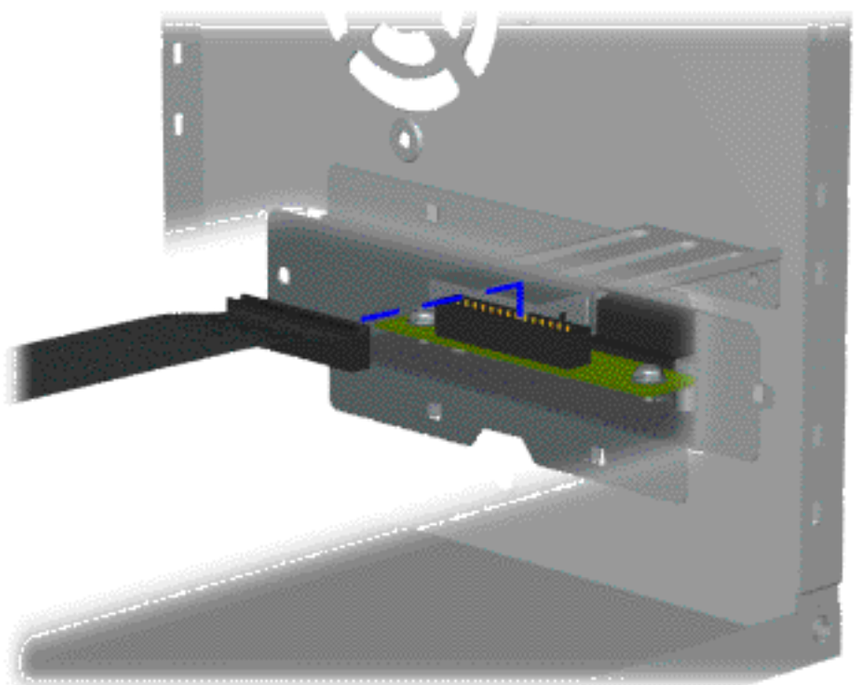
1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Remove the system board bracket
5. Remove the front bezel
6. Remove the two screws from the button assembly and remove the assembly from the rear of front bezel

To replace the button board assembly, reverse this procedure.

DISASSEMBLY SEQUENCE
Electrostatic discharge
Service considerations
Preparation for disassembly
Serial number
Hood
Fax-modem
System board bracket
Serial port assembly
Mass storage devices
System board
Power supply
Front bezel
Instant On button board
Creativity Action Center

REMOVAL & REPLACEMENT

Creativity Action Center (for 5000/5100 Series only)

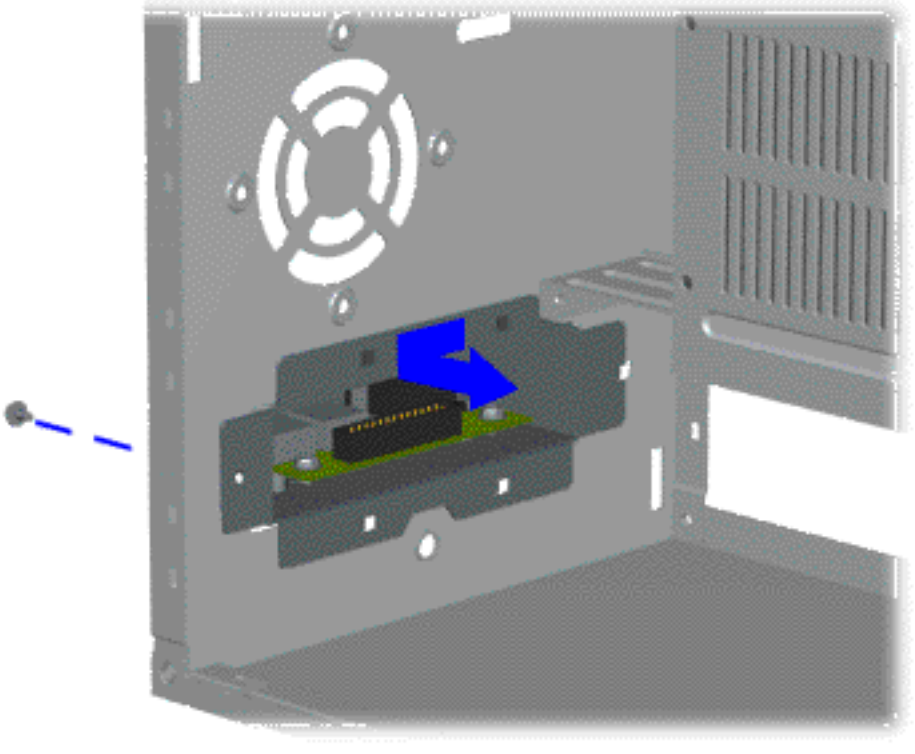


1. Perform preparation procedures
2. Remove the hood
3. Remove the fax/modem
4. Remove the system board bracket
5. Remove the front bezel from the chassis
6. Disconnect the cable from the creativity action center

NEXT STEP

REMOVAL & REPLACEMENT

Creativity Activity Center, continued



7 Remove the screws holding the Creativity Action Center port to the front bezel

8 Slide the Creativity Action Center port to one side and pull it out

END OF SEQUENCE

TROUBLESHOOTING - INDEX PAGE

Clearing CMOS

Power-On Self Test (POST)

Configuration
- Preparing the computer
- Setup
- Accessing Compaq utilities options

Diagnostic error codes

Troubleshooting without diagnostics
- Checklist for minor problems
- Hardware installation
- Power
- USB
- Monitor
- Diskette drive
- Hard drive
- CD drive
- DVD drive
- Resolving hardware conflicts

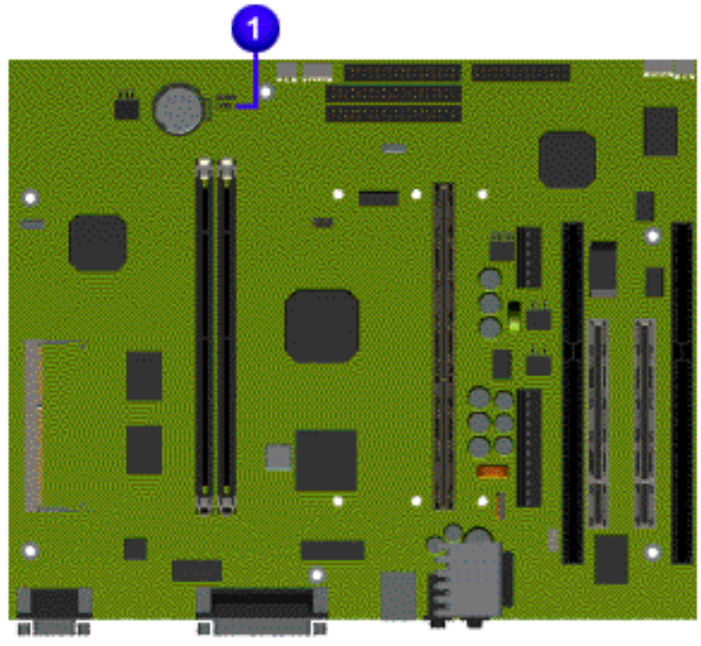
Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Clearing CMOS

If the power-on password is unknown, clearing CMOS will disable the password and allow the computer to be operated.

The board shown is one used for the 5000/5100 Series computers. If you have a 4900 Series computer, click the link for the correct board and CMOS location.



CMOS jumper location

1. Complete the preparation for disassembly procedures.
2. Remove the hood.
3. Remove the fax/modem board.
4. Open the system board bracket.

NOTE:	If your board is different from the one shown, click here to see two alternative boards used on 5000/5100 Series computers.

5. To disable the password, move the jumper 1 (J22) from pins 1-2 to pins 2-3 for 10 seconds, then return to pins 1-2.
6. Replace the system board bracket and perform the desired troubleshooting.

Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Power-On Self Test (POST)

POST is a series of diagnostic tests that run automatically when the system is turned on. After the computer is turned on, ***POST*** checks the following assemblies to ensure that the computer system is properly functioning:

- Keyboard
- System board
- Memory modules
- Video memory
- Diskette drives
- Hard drive
- Power supply

POST also detects the type of mass storage devices installed in the computer.

If ***POST*** finds an error in the system, an error condition is indicated by an audible and/or visual message. The table below gives explanations of the error codes and a recommended course of action.

NOTE:	An external speaker must be installed into the speaker output connector to hear audible beeps during ***POST***.

Click a link below to find the probable cause and recommended action for a given error message.

Diskette Drive A or B Error
Extended RAM failed at offset *nnn*
Failing Bits *nnn*
Fixed Disk 0 or 1 Failure
Fixed Disk Controller Failure
Incorrect Drive A Type
Invalid NVRAM Media Type
Keyboard Controller Error
Keyboard Error
Operating System Not Found
Parity Check 1
Parity Check 2
Real Time Clock Error
System Battery is Dead
System BIOS Shadowed
System Cache Error
System CMOS Checksum Bad
System RAM Failed at Offset, *nnn*
System Timer Error
UMB Upper Limit Segment Address *nnn*
Video BIOS Shadowed

POST Messages

Error message	Probable Cause	Recommended Action
Diskette Drive A or B Error	Drive A: or B: is present, but fails the BIOS POST diskette tests	1. Run Setup. 2. Replace the signal cables. 3. Replace the drive.
Extended RAM failed at offset *nnn*	Extended memory not working or not configured properly	1. Replace the memory modules. 2. Replace the system board.
Failing Bits *nnn*	*nnn* is a map of the bits at the RAM address which failed the memory test	1. Run Setup. 2. Replace the system board.
Fixed Disk 0 or 1 Failure	Hard drive is not working or not configured properly	1. Run Setup. 2. Replace the signal cable. 3. Replace the hard drive.
Fixed Disk Controller Failure	Hard drive is not working or not configured properly	1. Run Setup. 2. Replace the system board.
Incorrect Drive A Type	Type of diskette in drive A: not correctly identified	1. Run Setup. 2. Replace the diskette drive.
Invalid NVRAM Media Type	Problem with NVRAM (CMOS) access	Replace the system board.
Keyboard Controller Error	Keyboard, I/O keyboard controller (on system board), or mouse error	1. Replace the keyboard. 2. Replace the mouse. 3. Replace the system board.
Keyboard Error	Keyboard, I/O keyboard controller (on system board), or mouse error	1. Replace the keyboard. 2. Replace the mouse. 3. Replace the system board.
Operating System Not Found	Operating system cannot be located on either drive A: or C:	Run Setup.
Parity Check 1	Parity error found in the system bus	1. Run Setup. 2. Replace the memory modules. 3. Replace the system board.
Parity Check 2	Parity error found in the I/O bus	1. Run Setup. 2. Replace the ISA board (modem).
Real Time Clock Error	Real-time clock fails BIOS test	Replace the system board.
System Battery is Dead	RTC battery is dead	1. Replace the RTC battery. 2. Run Setup.
System BIOS Shadowed	System BIOS copied to Shadow RAM	Status message. No action required.
System Cache Error	RAM cache failed the BIOS test	Run Setup.
System CMOS Checksum Bad	CMOS is corrupted or modified incorrectly	Run Setup.
System RAM Failed at Offset, *nnn*	System RAM failed	Replace memory modules.
System Timer Error	DMA, timers, etc.	Replace the system board.
UMB Upper Limit Segment Address *nnn*	Displays the address *nnn* of the upper limit of Upper Memory Blocks, indicating released segments of the BIOS	Status message. No action required.
Video BIOS Shadowed	Video BIOS successfully copied to shadow RAM	Status message. No action required.

Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Configuration

This section explains how to use Setup and Compaq Utilities which should be accessed in the following instances:

- When a system configuration error is detected during the Power-On Self-Test (POST)
- To change factory default settings for some of the computer features
- To change the system configuration, which is sometimes necessary when you add or remove optional hardware
- To set system configuration features

Click a link below to go to the appropriate subsection.

Preparing the Computer

Setup

Accessing Compaq Utilities Options

View System Information (INSPECT)

Preparing the Computer

If you encounter an error condition, complete the following steps before starting problem isolation procedures:

1. Ensure proper ventilation. The computer should have a 3-inch (7.6 cm) clearance at the back of the system unit.
2. Turn off the computer and peripheral devices.

CAUTION: Always ensure that the power is off before disconnecting or reconnecting the mouse, keyboard, or any other peripheral devices. Disconnecting or connecting the keyboard or mouse while the unit power is on can damage the system board.

3. Disconnect any peripheral devices other than the monitor and keyboard. Do not disconnect the printer if you want to test it or use it to log error messages.
4. Install loop-back and terminating plugs for complete testing.

Setup

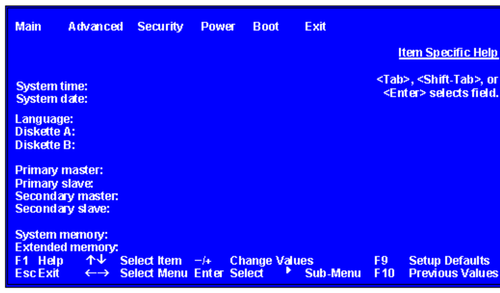
The Setup utility gives a snapshot of the computer's hardware configuration, aids in troubleshooting, and sets custom features. Setup recognizes a new internal component or an external device and automatically updates the configuration screens. Use the Setup utility to:

- Modify settings for audio, storage, power management, communications, and input devices
- Get an overall picture of the computer's hardware configuration
- Verify configuration parameters in determining problems
- Set time and date

Running Setup

To access the Setup utility, turn on the computer and press the **F10** key when the Compaq logo appears. The following menu will appear:

NOTE: The actual menu displayed on your computer may vary slightly, depending on your configuration.



Accessing Compaq Utilities Options

This section provides information about the menu options accessible from the **Compaq Utilities** menu.

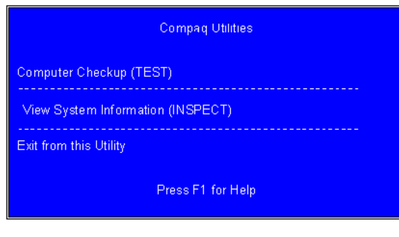
Create a Compaq Utilities Diskette

A Compaq Utilities diskette must be created to troubleshoot the system. To create a Compaq Utilities diskette, complete the following steps:

1. Insert the *QuickRestore CD* into the CD drive.
2. From the Windows desktop, click on **Start,** then **Program,** then **Windows Explorer.**
3. Click on the CD drive icon.
4. Double-click on the **PCdiags** folder.
5. Insert a diskette in the diskette drive.
6. Double-click on the **QRST5.exe** icon.
7. Press **Enter** when the QuickRestore label appears.
8. After the CD has completed copying to the diskette, eject the *QuickRestore CD*.

Running Compaq Utilities

To run Compaq Utilities, turn on or reboot the computer with the Compaq Utilities diskette in the diskette drive. The following menu will appear:



View System Information (INSPECT)

The View System Information (INSPECT) utility provides information about the system once it has been configured. INSPECT operates with MS-DOS and provides information about the system operating environment including:

- Contents of the operating system startup files
- Current memory configuration
- ROM version
- Type of processor and coprocessor
- Diskette and hard drives
- Active printer and communications interfaces
- Modem

Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Diagnostic Error Codes

Diagnostic error codes occur if the system recognizes a problem while running the Compaq Utilities program. These error codes help identify possibly defective subassemblies.

Tables listed on this page give possible error codes, descriptions of each error condition, and actions required to resolve the error condition.

IMPORTANT:	Retest the system after completing each step. If the problem has been resolved, do not proceed with the remaining steps.

For assistance in the removal and replacement of a particular subassembly, see *Removal and Replacement Procedures*.

100-xx	Processor	*800-xx*	Monochrome video	*3200-xx*	Audio
200-xx	Memory	*1100-xx*	Serial	*3300-xx*	CD or DVD
300-xx	Keyboard	*1200-xx*	Modem	*6600-xx*	CD or DVD
400-xx	Parallel (printer)	*1700-xx*	Hard drive	*8600-xx*	Pointing device interface
500-xx	Monitor	*1900-xx*	Tape drive		
600-xx	Diskette drive	*2400-xx*	Video		

Keyboard error codes

Error Code	Description	Recommended Action
301-xx	Keyboard short test, 8042 self-test failed	The following steps apply to error codes 301-xx through 304-xx: 1 Check the keyboard connection. If disconnected, turn the computer off and connect the keyboard. 2 Replace the keyboard and retest. 3 Replace the system board and retest.
302-xx	Keyboard long test failed	
303-xx	Keyboard LED test, 8042 self-test failed	
304-xx	Keyboard typematic test failed	

Parallel (printer) error codes

Error Code	Description	Recommended Action
401-xx	Printer failed or not connected	The following steps apply to error codes 401-xx through 498-xx: 1 Connect the printer. 2 Check power to the printer. 3 Install the loop-back connector and retest. 4 Replace system board and retest.
402-xx	Printer data register failed	
403-xx	Printer pattern test failed	
498-xx	Printer failed or not connected	

Monochrome video error codes

Error Code	Description	Recommended Action
802-xx	Video memory test failed	The following step applies to error codes 802-xx through 824-xx: Replace the system board and retest.
824-xx	Monochrome video text mode test failed	

Serial error codes

Error Code	Description	Recommended Action
1101-xx	Serial Port Test	The following steps apply to error codes 1101-xx through 1109-xx: 1 Check the switch settings on the serial/parallel device, if applicable. 2 Replace the system board and retest.
1109-xx	Clock Register Test	

Modem error codes

Error Code	Description	Recommended Action
1201-xx	Modem Internal Loop-Back Test	The following steps apply to error codes 1201-xx through 1210-xx: 1 Refer to modem documentation for correct Setup procedures. 2 Check the modem line. 3 Replace the modem and retest.
1202-xx	Modem Time-Out Error	
1203-xx	Modem External Termination Test	
1204-xx	Modem Auto Originate Test	
1206-xx	Dial Multifrequency Tone Test	
1210-xx	Modem Direct Connect Test	

Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Diagnostic Error Codes (continued)

Hard drive error codes

Error Code	Description	Recommended Action
1700-xx	Hard drive ID types test failed	The following steps apply to error codes 1700-xx through 1799-xx: 1 Run Setup and verify drive type. 2 Replace the hard drive signal and power cables and retest. 3 Replace the hard drive and retest. 4 Replace the system board and retest.
1701-xx	Hard drive format test failed	
1702-xx	Hard drive read test failed	
1703-xx	Hard drive write/read/compare test failed	
1704-xx	Hard drive random seek test failed	
1705-xx	Hard drive controller test failed	
1706-xx	Hard drive ready test failed	
1707-xx	Hard drive recalibration test failed	
1708-xx	Hard drive format bad track test failed	
1709-xx	Hard drive reset controller test failed	
1710-xx	Hard drive park head test failed	
1714-xx	Hard drive file write test failed	
1715-xx	Hard drive head select test failed	
1716-xx	Hard drive conditional format test failed	
1717-xx	Hard drive ECC* test failed	
1719-xx	Hard drive power mode test failed	
1719-x	Hard drive power mode test failed	
1730-x	Fixed Disk 0 does not support DMA Mode	
1731-x	Fixed Disk 1 does not support DMA Mode	
1740-x	Fixed Disk 0 failed Set Block Mode command	
1741-x	Fixed Disk 1 failed Set Block Mode command	
1750-x	Fixed Disk 0 failed Identify command	
1751-x	Fixed Disk 1 failed Identify command	
1760-x	Fixed Disk 0 does not support Block Mode	
1761-x	Fixed Disk 1 does not support Block Mode	
1790-x	Disk 0 Configuration Error	
1792-x	Secondary Disk Controller Failure	
1799-xx	Invalid hard drive type failed	

Error Correction Code

Tape drive error codes

Error Code	Description	Recommended Action
1900-xx	Tape ID failed	The following steps apply to error codes 1900-xx through 1906-xx: 1 Replace the tape cartridge and retest. 2 Check and/or replace the signal cable and retest. 3 Replace the tape drive and retest. 4 Replace the system board and retest.
1901-xx	Tape servo write failed	
1902-xx	Tape format failed	
1903-xx	Tape drive sensor test failed	
1904-xx	Tape BOT/EOT test failed	
1905-xx	Tape read test failed	
1906-xx	Tape write/read/compare failed	

Pointing device interface error codes

Error Code	Description	Recommended Action
8601-xx	Pointing Device Interface test failed	1. Replace with a working pointing device and retest. 2. Replace the system board and retest.

Audio error codes

Error Code	Description	Recommended Action
3206-xx	Audio System Internal Error	Replace the system board and retest.

CD or DVD error codes

Error Code	Description	Recommended Action
3301-xx **3305-xx** **66XX-xx**	CD or DVD drive read test failed	The following steps apply to error codes 3301-xx through 3305-xx and 66XX-xx: 1 Replace the CD or DVD and retest.* 2 Check the jumper settings on the CD or DVD drive. 3 Check and/or replace the power and signal cables and retest. 4 Replace the CD or DVD drive and retest. 5 Replace the backplane.

**** Boot to DOS (Command Prompt only) or Windows (Not Safe Mode). Press the CD or DVD drive eject button (located on the front bezel) to eject the CD or DVD and retest.***

Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Troubleshooting Without Diagnostics

This section describes some simple, preliminary tests and guidelines for troubleshooting the computer.

Checklist For Solving Minor Problems

If you encounter some minor problem with the computer or software application, go through the following checklist for possible solutions before running any of the diagnostic utilities:

- Is the computer connected to a working power outlet?
- Is the computer turned on and the power light illuminated?
- Are all cables connected properly and seated?
- Are all of the necessary device drivers installed?
- Is the *CONFIG.SYS* file correct?
- Is the *AUTOEXEC.BAT* file (MS-DOS) or *STARTUP.CMD* file correct?
- Was a nonbootable diskette loaded in the diskette drive at power-up?
- Are all switch settings correct?
- Was Computer Setup run after installing options (memory, disk drives, etc.) and before installing industry standard architecture boards?

Quick checks and possible solutions for problems related to these topics:

CD drive	hard drive	VGA monitor
diskette drive	hardware installation	
DVD drive	power	
flat-panel monitor	USB ports	

are provided in the tables below. The procedure for resolving hardware conflicts is also described.

Flat-panel monitor

Problem	Probable cause(s)	Possible solution
Screen is blank.	Your computer may not support flat-panel monitors.	See your authorized dealer or reseller about CPU support for the Digital Video Interface (DVI) needed.
Cannot find video connector on rear of CPU for flat-panel monitor.	Your computer may not have a digital flat-panel port (DFPP).	See your authorized dealer or reseller about CPU support for flat-panel monitors.
The display only fills part of the screen.	The monitor does not support your resolution setting.	FP400 and FP500 Series flat-panel monitors only support 1024 x 768 resolution mode. Change your resolution setting in the **Display** dialog box: **1** Click on **Start** **2** Point at **Settings** and click on **Control Panel** **3** Double-click on **Display** **4** Click on the **Setting** tab, and move the sliding pointer to give 1024 x 768 pixel resolution.
Green power light is flashing.	Your flat-panel monitor does not support the video resolution or refresh rate.	FP400 and FP500 Series flat-panel monitors only support 1024 x 768 resolution mode. Connect a VGA monitor temporarily and change your resolution setting in the **Display** dialog box: **1** Click on **Start** **2** Point at **Settings** and click on **Control Panel** **3** Double-click on **Display** **4** Click on the **Setting** tab, and move the sliding pointer to give 1024 x 768 pixel resolution.

CD drive

Problem	Probable cause(s)	Possible solution
Cannot read compact disc.	CD is not properly seated in the drive.	Eject the CD, press down on the CD firmly to correctly seat it in the drive, then reload.
	CD has been loaded upside down.	Eject the CD, turn it over, then reload.
	CD may be dirty or scratched.	Clean the CD or load another CD.
Cannot eject compact disc (tray-load only).	CD is not properly seated in the drive.	Turn off the computer, insert a straightened paper clip into the emergency eject hole, then push firmly. Slowly pull the tray out from the drive until the tray is fully extended, then remove the CD.
CD drive devices are not detected.	Power cycle delay.	After turning the computer off, wait 30 seconds before turning the computer on again.
	CD drive is not connected properly.	Open the computer and check to see that the drive cable is connected properly.
	Proper driver is not loaded	Restart the system and make sure the CD drive drivers are loaded.

DVD drive

Problem	Probable cause(s)	Possible solution
Cannot read DVD disk	DVD or CD is not properly seated in the drive.	Eject the DVD or CD, press down on the DVD or CD firmly to correctly seat it in the drive, then reload.
	DVD or CD has been loaded upside down.	Eject the disk, turn it over, then reload.
	DVD or CD disk may be dirty or scratched.	Load another DVD disk.
DVD does not work in the DOS mode.	Proper drivers are not loaded.	Restart the system and make sure the DVD drive drivers are loaded.
Cannot eject DVD disk.	The system is in the Sleep mode.	Press the Power button to bring the system back to full power, then eject the DVD.
	The DVD, diskette, or hard drive was active when attempting to eject the DVD.	Wait until all drive activity ends (the CD/hard drive light and diskette drive light will go out), then try to eject the DVD.
	DVD disk is not properly seated in the drive.	Turn off the computer, insert a straightened paper clip into the emergency eject hole, then push firmly. Slowly pull the tray out from the drive until the tray is fully extended, then remove the DVD disk.
DVD drive devices are not detected.	DVD drive is not connected properly.	Open the computer and check to see that the drive cable is connected properly.
	Incorrect driver is installed.	Ensure the correct driver is installed in *CONFIG.SYS*.
	Drive has been changed.	Make sure the jumper setting is set for "Slave."
	Proper drivers are not loaded.	Restart the system and make sure the DVD drive drivers are loaded.

Resolving Hardware Conflicts

Hardware conflicts occur when two or more peripheral devices attempt to use the same hardware resources. I/O addresses, interrupts, and DMA channels are the most common hardware resources used by peripheral devices. For example, the factory default settings for the MIDI port audio interface are:

Base I/O address	220H
MIDI Port Base I/O address	330H
Interrupt	IRQ 5
8-bit DMA	Channel 1

When different peripheral devices use the same hardware resources at the same time, the devices and/or the system may not function properly. You can resolve hardware conflicts by ensuring that no devices are configured to use the same hardware resources. These resources can either be dipswitch or jumper settings on the peripheral card or software configurable resources. The Computer Setup selection of your Compaq Utilities allows you to view and modify the settings for the peripheral devices factory installed in your system. Refer to the *User's Guide* for the particular peripheral cards you wish to install for information on how to view and select their settings.

To resolve hardware conflicts:

1. Change the hardware settings of your audio card or other peripheral card in your system if the peripheral card is using any settings used by the factory-installed devices.
2. If you are unsure of the settings of the peripheral cards, you can isolate the source of the problem by temporarily removing all cards not maufactured by Compaq, or resetting the default settings and running Compaq Utilities. After that, add the cards back one at a time until the card that is causing the conflict is found.

Also see... System

Clearing CMOS
Power-On Self Test (POST)
Configuration
Diagnostic error codes
Troubleshooting without diagnostics

TROUBLESHOOTING

Troubleshooting Without Diagnostics (continued)

Hard drive		
Problem	**Probable cause(s)**	**Possible solution**
Hard drive error occurs.	Hard disk has bad sectors or has failed.	Run *Computer Checkup* (TEST) and *Computer Setup*. Reformat the hard disk.
Drive not found.	Cable could be loose.	Check cable connections.
Disk transaction problem.	Either the directory structure is bad or there is a problem with a file.	From the desktop click on the **Start** menu. Choose *Program* ➔ *Accessories* ➔ *System Tools* ➔ *Scandisk* to check for problems. If problems exist, run Scandisk and checkmark the "Automatically fix errors" box at the bottom to correct the problems. If a large number of lost allocation units is found, click on the **Start** menu. Choose *Program* ➔ *Accessories* ➔ *System Tools* ➔ *Disk Defragmenter*.
Nonsystem disk message.	The system is trying to start from a diskette that is not bootable.	Remove the diskette from the diskette drive.
	The system is trying to start from the hard drive but the hard disk has been damaged.	Insert a bootable diskette into the diskette drive and restart the computer with **Ctrl**+**Alt**+**Del**.
	Diskette boot has been disabled in Computer Setup.	Run *Computer Setup* and enable diskette boot.
Hard drive operation seems slow **OR** **Hard drive activity light is not on, or stays on without blinking.**	The hard disk files may be fragmented.	From the desktop click on the **Start** menu. Choose *Program* ➔ *Accessories* ➔ *System Tools* ➔ *Scandisk* to check for problems. If problems exist, run Scandisk and checkmark the "Automatically fix errors" box at the bottom to correct the problems. If a large number of lost allocation units is found, click on the **Start** menu. Choose *Program* ➔ *Accessories* ➔ *System Tools* ➔ *Disk Defragmenter*.

Hardware installation		
Problem	**Probable cause(s)**	**Possible solutions**
A new device is not recognized as part of the computer system.	When the system advised you of changes to the configuration, you did not save the changes.	Reboot the computer and follow the instructions for saving the changes.
	The system may not have automatically recognized the new device.	Run Computer Setup and identify the new device.
	The cables for the new external device are loose, or the power cables are unplugged.	Check all cables.
	The power switch for the new external device is not turned on.	Turn off the computer, turn on the external device, and then turn on the computer to integrate the new device with the computer.

Power	
Problem	**Possible Solution**
Computer will not turn on.	Ensure that the computer is connected to a power source.
Computer does not automatically display the date and time.	The real-time clock (RTC) battery may need to be replaced. Click here for replacement procedures.
Computer does not beep during POST.	The speaker volume may have been turned down. Select the **Volume** option from the Control Panel and adjust the volume.
Computer powered off automatically.	The unit temperature may have been exceeded. Check the fan for function and blockage.

USB		
Problem	**Probable cause(s)**	**Possible solution**
USB device does not work with the system.	The USB device and the system may use different USB architectures.	Ensure that the USB device and the system share the same USB architecture. (UHCI-compliant devices will only work with a UHCI-compliant system, and OHCI-compliant devices will only work with a OHCI-compliant system).

Diskette Drive		
Problem	**Probable cause(s)**	**Possible solution**
Diskette drive light stays on.	Diskette may be damaged.	From the desktop click on the **Start** menu. Choose Program ➔ Accessories ➔ System Tools ➔ Scandisk to check for problems.
	Diskette may be installed incorrectly.	Remove the diskette and reinsert.
	Software program may be damaged.	Check the program diskettes.
Diskette drive cannot write to a diskette.	Diskette is not formatted.	Format the diskette.
	Diskette is write-protected.	Either use another diskette that is not write-protected or disable the write protection on the diskette.
	Writing to the wrong drive.	Check the drive letter in your path statement.
	Not enough space is left on the diskette.	Use another diskette to write the information.
Diskette drive cannot read a diskette.	Diskette is not formatted.	Format the diskette.
	Using the wrong diskette type for the drive type.	Use a diskette that is compatible with the drive.
	Reading the wrong drive.	Check the drive letter in your path statement.
	Diskette drive has been disabled by *Computer Setup*.	Run *Computer Setup* and enable the diskette drive.

VGA Monitor		
Problem	**Probable cause(s)**	**Possible solution**
Characters are dim.	The brightness control is not set properly.	Adjust the brightness control.
Screen is blank.	A screen-blanking utility could be installed.	Press any key. If the display reappears, you have a screen-blanking utility installed.
	The brightness needs adjusting.	Adjust the brightness control.
	Screen save has been initiated.	Press any key or move the mouse to light the screen.
Garbled characters on the screen are mixed with text.	The ANSI.SYS driver is not in the *CONFIG.SYS* file.	Add the ANSI.SYS driver to the *CONFIG.SYS* file by adding the following line: DEVICE = C:\ANSI.SYS
Monitor overheats.	There is not enough ventilation space for proper airflow.	Leave at least 3 inches (7.6 cm) of ventilation space. Also, be sure there is nothing on top of the monitor to obstruct air flow.
Cursor will not move using the arrow keys on the numeric keypad.	The **Num Lock** key is on.	Press the **Num Lock** key. The **Num Lock** light should not be on when you want to use the arrow keys.
	There is a possible application error.	Restart the computer.

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

System Specifications

General system specifications
Video memory
System interrupts
System I/O (system function - shipping configuration)
System memory
System DMA

General System Specifications

	U. S.	Outside U. S.
Dimensions		
Height	15.50 in	39.37 cm
Depth	12.00 in	30.48 cm
Width	8.63 in	21.92 cm
BTUs	<178 BTUs/hour*	
Weight	24.0 lbs	10.9 kg
Shipping Weight		
Gross	34.6 lbs	15.72 kg
Net	24 lbs	10.90 kg
Input Requirements		
Nominal Line Voltage	100 to 120 VAC	220 to 240 VAC
Range Line Voltage	90 to 132 VAC	180 to 264 VAC
Line Frequency	47 to 63 Hz	47 to 63 Hz
Input Current	5.2 at 90 VAC	3.6 at 180 VAC
Power (watts)		
Steady State	110	110

Environmental Requirements

Temperature		
Operating	50° to 95° F	10° to 35° C
Shipping	-4° to 140° F	-20° to 60° C
Humidity (noncondensing)		
Operating	8% to 90%	8% to 90%
Nonoperating	5% to 95%	5% to 95%
Maximum Altitude (unpressurized)		
Operating	10,000 ft	3048 m
Nonoperating	30,000 ft	9144 m

**This number will increase if more bays/slots are occupied.*

ATI 3-D RagePro Video Memory

Resolution	Colors	Vertical Refresh (Hz)
640 × 480	256	60 and 75
640 × 480	65K (high color)	60 and 75
640 × 480	16M (true color)	60
800 × 600	256	60 and 75
800 × 600	65K (high color, default)	60 and 75
800 × 600	16M (true color)	60 and 75
1024 × 768	256	60 and 75
1024 × 768	65K (high color)	60 and 75
1024 × 768	16M (true color)*	60 and 75
1280 × 1024	256	60
1280 × 1024	65K (high color)*	60
1280 × 1024	16M (true color)*	60

**With 4-MB video memory only*

System Interrupts

Hardware IRQ	System Function
IRQ 0	Refresh Timer
IRQ 1	Keyboard
IRQ 2	Interrupt Controller Cascade
IRQ 3	Controllerless modem (COM 2) shared data/fax
IRQ 4	Serial Port A (COM 1)
IRQ 5	Entertainment Audio*^
IRQ 6	Diskette Drive
IRQ 7	Parallel Port (LPT 1)*
IRQ 8	Real-Time Clock
IRQ 9	Available
IRQ 10	ISDN Modem if present*
IRQ 11	PCI Bus shared with Video, USB, DVD
IRQ 12	Mouse
IRQ 13	Numeric Coprocessor
IRQ 14	Disk Drive (Primary IDE)
IRQ 15	Disk Drive (Secondary IDE)

^Audio must use this setting for game compatibility. Used for audio, MPU-401, and volume control.
**Default configuration; other configurations are as follows:*
Modem - IRQ 4, 10, 11, none
Parallel Port - IRQ 3, 4, 5, 9, 10, none
System Audio - IRQ 7, 9, 10, none
Serial Port - IRQ 3, 5, 7, 9, 10, 12, none

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

System Specifications (continued)

General system specifications
Video memory
System interrupts
System I-O
System memory
System DMA

System I/O

I/O Address (Hex)	System Function (Shipping Configuration)
000 - 00F	DMA Controller # 1
010 - 01F	DMA controller aliases
020	Interrupt Controller # 1 Control Register
021	Interrupt Controller #1 Mask Register
022 - 03D	Inerrupt Controller Aliases
040 - 043	Counter/Timer
044 - 04F	Unused
050-053	Counter/Timer Aliases
053-05F	Unused
060	Keyboard Controller Data Register
061	Port B: SERR/IOCHK NMI, Speaker, Refresh
062 - 063	Unused
064	Keyboard Controller Command/Status Register
065 - 06F	Unused
070	NMI mask register (bit 7)
070	RTC/Configuration Memory Index Port (bit 6:0)
071	RTC/Configuration Memory Data Port
072	RTC Extended Index
073	RTC Extended Data
074-07F	Unused
080 - 08F	DMA Page Registers
090 - 091	Unused (alias of DMA page registers if PIIX4.4C.7=0)
092	Port 92 (fast reset and A20 gate)
093 - 09F	Unused (alias of DMA page registers if PIIX4.4C.7=0)
0A0	Interrupt Controller # 2 Control Register
0A1	Interrupt Controller # 2 Mask Register
0A2 - 0B1	Unused
0B2	APM Control
0B3	APM Status
0B4-0BF	Unused
0C0 - 0DF	DMA Controller # 2
0E2 - 0E3	DDC2 Registers
0E4 - 0E5	Master I2C Interface
0E7 - 0E9	Unused
0EA	Ultra I/O Index Register
0EB	Ultra I/O Data Register
0EC- 0EF	Modem Configuration
0F0 - 0F1	Coprocessor Busy Clear/Reset
0F2 - 0F8	Unused
OFA	Unused
0FC-0FF	Unused
100 - 101	Unused
102	Video Controller: POS 102 Register
103-12F	Unused
132 - 16F	Unused
170 - 177	Secondary IDE Controller (CD Drive)
178 - 1EF	Unused
1F0 - 1F7	Primary IDE Controller (Hard Drive)
1F8 - 200	Unused
201	Joystick (Decode in ES 1869)
202 - 21F	Unused
220 - 22F	Entertainment Audio
230 - 25F	Unused
260 - 263	Reserved - Modem use during POST
264 - 277	Unused
278 - 27F	Reserved - Parallel Port (LPT 2)
280 - 2E7	Unused
2E8 - 2EF	Reserved - Serial Port (COM 4)
2F0 - 2F7	Unused
2F8 - 2FF	Modem (COM 2)
330 - 331	MPU-401 (Decode in ES 1869)
332 - 36F	Unused
370 - 377	Reserved - Diskette Drive Controller 2 (370-371 used for SIO lock/unlock)
378 - 37F	Parallel Port (LPT 1)
380 - 387	Unused
388 - 38B	Audio FM Synthesizer - ES 1869
38C - 3B3	Unused
3B4 - 3B5	Video Controller: Monochrome
3B6 - 3B9	Unused
3BA	Video Controller: Monochrome
3BB	Unused
3BC -3BF	Reserved - Parallel Port
3C0 -3CF	Video Controller: VGA Registers
3D0 - 3D3	Unused
3D4 - 3D5	Video Controller: Color
3D6 - 3D9	Unused
3DA	Video Controller: Color
3DB - 3E7	Unused
3E8 - 3EF	Reserved: Serial Port (COM 3)
3F0 - 3F7	Diskette Controller (Primary)
3F6 - 3F7	IDE Interface (Hard disk and CD or DVD Drive)
3F8 - 3FF	Serial Port (COM 1)
4D0	Interrupt Controller 1 Edge/Level Control
4D1	Interrupt Controller 2 Edge/Level Control
4D2 - 677	Unused
678 - 67A	Parallel Port ECP Mode
778 - 77A	Parallel Port ECP Mode
CF8	PCI Configuration Index (32 bit I/O only)
CF9	Reset Control
CFC - CFF	PCI Configuration Data
46E8	Video Controller: Adapter Sleep

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

System Specifications (continued)

General system specifications
Video memory
System interrupts
System I-O
System memory
System DMA

System Memory

Size	Memory Address	System Function
640 K	00000000 - 0009FFFF	Base Memory
128 K	000A0000 - 000BFFFF	Video RAM
32 K	000C0000 - 000C7FFF	Video ROM
32 K	000C8000 - 000CFFFF	Legacy USB Device Header (when legacy support enabled)
64 K	000D000 - 000DFFFF	Unused
48 K	000E0000 - 000EBFFF	Unused (Not available for option cards. May use for UMBs.)
16 K	000EC000 - 000EFFFF	16-bit cacheable, shadowable, read-only memory. Not available for option cards.
64 K	000F0000 - 000FFFFF	System BIOS ROM shadow image
15 M	00100000 - 00FFFFFF	Standard Extended Memory
64 M	01000000 - 04FFFFFF	Rest of Extended Memory
60 M	05000000 - 07FFFFFF	Unused
512 K	08000000 - 0807FFFF	Standard Direct Video Memory
512 K	08080000 - 080FFFFF	Optional Direct Video Memory
1919 M	08100000 - 7FFFFFFF	Unused
16 M	80000000 - 80FFFFFF	Memory mapped I/O devices
~2000 M	81000000 - FDFDFFFF	Unused/System ROM aliases
128 K	FDFE0000 - FDFFFFFF	System ROM (alias)
~32 M	FE000000 - FFFDFFFF	Unused
128 K	FFFE0000 - FFFFFFFF	System BIOS ROM

System DMA

Hardware	System Function (Default)	Alternate Mappings
DMA 0	ECP Parallel	1, 2, none
DMA 1	Entertainment Audio	0, 3, none
DMA 2	Diskette Drive	none
DMA 3	Entertainment Audio	0, 1, none
DMA 4	Internally used for cascading	
DMA 5	Available	
DMA 6	Available	
DMA 7	Available	

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

Power Supply

	U. S.	Outside U. S.
Input Specifications		
Nominal Line Voltage	100 to 120 VAC	220 to 240 VAC
Range Input Line	90 to 132 VAC	180 to 264 VAC
Frequency Range	47 to 63 Hz	47 to 63 Hz
Power Factor	0.6	0.6
Input Power	280 Watts	280 Watts
Input Current	5.2 at 90 VAC	3.6 at 180 VAC
Inrush Current	80 A at 132 VAC (cold start)	80 A at 264 VAC (cold start)
Holdup Time	16 ms from zero crossing at 120 VAC	16 ms from zero crossing at 240 VAC
General Specifications		
Full Output Rating	To 122° F and 5,000 ft To 90° F and 10,000 ft (derate linearly)	To 50° C and 1524 m To 32° C and 3048 m (derate linearly)
Minimum Load	3.0 A on + 5.0 V output 0.04 A on 12 V output	3.0 A on + 5.0 V output; 0.04 A on 12 V output
Ambient Temperature Range		
Operating	50° to 122° F	10° to 50° C
Storage	-40° to 151° F	-40° to 66° C
Dielectric Voltage Withstand		
Input to Ground	2500 VAC/1 second	
Safety Standard	UL 1950; CSA 22.2 #950 or CSA 22.2 #234; TUV/VDE EN 60 950 (VDE0805/11.91); EMKO-TSE (74-SEC) 207/93	
Input Transient Susceptibility		
Common and Differential Mode (superimposed on AC line)	2500 V, 1 µs, damped sinusoidal 600 V, 10 µs pulse	
Differential Mode	20% step change in AC input voltage	

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

Diskette Drive

Diskettes	
Size (in)	3.5 (8.89 cm)
High Density (MB)	1.44
Low Density (KB)	720
Light	Green
Height	One-third
Bytes per Sector	512
Sectors per Track	
High Density	18
Low Density	9
Tracks per Side	
High Density	80
Low Density	80
Read/Write Heads	2
Average Seek Time (ms)	
Track-to-Track	3
Average	94
Settling Time	15
Latency Average	100

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

Specifications for Quantum hard drives immediately follow this link to Seagate hard drives

Quantum Hard Drives

	4.0-GB	6.0-GB	6.0-GB	8.0-GB
Compaq Part Number	286119	286122	286556	286123
Formatted Capacity				
Physical (MB)	4018	6506	6028	8038
Logical (MB)	4018	6506	6028	8038
Drive Type	65	65	65	65
Transfer Rate				
Media (Mbits/sec)	141.7	106.8	141.7	141.7
Interface (MBytes/sec)	33.3	16.7	33.3	33.3
Typical Seek Time (including settling)				
Single Track (ms)	2.5	1.1	2.5	2.5
Average (ms)	12.0	11.0	12.0	12.0
Full Stroke (ms)	24.0	18.0	24.0	24.0
Disk Rotational Speed (RPM)	4000	4490	4000	4000
Cylinders				
Physical	11490	7855	11490	11490
Logical	8306	13446	12459	15574
Data Heads				
Physical	2	8	3	4
Logical	15	15	15	16
Sectors per Track				
Physical	261-403	149-269	261-403	261-403
Logical	63	63	63	63
Buffer Size (kB)	128	128	128	128

Seagate Hard Drives

	3.2 GB	4.0-GB	6.4 GB	8.4 GB
Compaq Part Number	262477	286118	179127	334180
Formatted Capacity				
Physical (MB)	3227.1	4019	6448.6	8445.0
Logical (MB)	3227.1	4019	6448.6	8445.0
Drive Type	65	65	65	65
Transfer Rate				
Media (Mbits/sec)	87.8	87.8	83-140	83-140
Interface (MBytes/sec)	16.7 (non-UDMA) 33.0 (UDMA)	16.7	33.3	33.3
Typical Seek Time (including settling)				
Single Track (ms)	2.0	2.0	1.7	1.7
Average (ms)	12.0	12.0	11.5	11.5
Full Stroke (ms)	20.0	21.0	20.2	20.2
Disk Rotational Speed (RPM)	4500	4500	5400	5400
Cylinders				
Physical	5690	5690	13328	8557
Logical	6253	7787	8557	16383
Data Heads				
Physical	6	8	6	8
Logical	16	16	15	16
Sectors per Track				
Physical	63	114-234	180-306	180-306
Logical		63	63	63
Buffer Size (kB)	128	128	128	128

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

DVD Drive

Dimensions	*U. S.*	*Metric*
Width	5.74 in	14.60 cm
Height	1.68 in	4.29 cm
Depth	8.23 in	20.80 cm
Weight	1.80 lb	0.9 kg
Applicable Disc		
DVD-5, DVD-9, DVD-10, DVD-18	Mode 1 and Mode 2	
CD-ROM	Audio	
CD-DA	Mode 2, Form 1 and 2	
CD-XA	Single and Multiple Session	
Photo CD		
CD-I Ready		
CD-Bridge		
CD-R		
Block Size		
CD-ROM Mode 0	2352 bytes	
CD-ROM Mode 1	2352, 2340,2336, 2048 bytes	
CD-ROM Mode 2	2352,2340, 2336, 2048 bytes	
DVD	2048 bytes	
Center Hole	15 mm diameter	
Diameter	12 cm, 8 cm	
Thickness	1.2 mm	
Track Pitch	1.6 µm	
Laser		
Beam Divergence	53.5 degrees +/- 1.5 degrees	
Output Power	5 mW	
Type	Semiconductor laser GaAIAs	
Wave Length	650 nm +/- 25 nm (DVD) 795 nm +/- 25 nm (CD)	
Access Time		
	DVD:	**CD:**
Random	< 150 ms	< 100 ms
Full Stroke	< 225 ms	< 225 ms
Audio Output Level		
Line Out	1.0 V (RMS) at 47 kW	
Headphone	0.7 V (RMS) at 32 W	
Cache Buffer	128 kB	
Sustained Data Transfer Rate	150 KB/sec (single, CD-ROM mode) 1200-3000 KB/sec (20× CAV CD-ROM mode) 2760 KB/sec (DVD mode)	
Interface Cable Length (Max)	18 in	
Startup Time	< 15 sec	
Stop Time	< 2 sec	

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

CD Drives

Information for the 32x CD drive immediately follows this link to the 24x CD drive

32× CD Drive

	U. S.	Metric
Dimensions		
Width	5.75 in	14.80 cm
Height	1.67 in	4.20 cm
Depth	8.23 in	20.80 cm
Weight	2.65 lb	1.2 kg
Applicable Disc		
CD-ROM	Mode 1 and Mode 2	
CD-DA	Audio	
CD-XA	Mode 2, Form 1 and 2	
Photo CD	Single and Multiple Session	
Block Size		
CD-ROM Mode 1	2048 bytes	
CD-ROM Mode 2	2340, 2336 bytes	
CD-DA	2352 bytes	
CD-XA	2328 bytes	
Center Hole	15 mm diameter	
Diameter	12 cm, 8 cm	
Thickness	1.2 mm	
Track Pitch	1.6 µm	
Laser		
Beam Divergence	53.5 degrees +/- 1.5 degrees	
Output Power	0.14 mW	
Type	Semiconductor laser GaAIAs	
Wave Length	780 nm +/- 25 nm	
Access Time		
Random	< 85 ms	
Full Stroke	< 145 ms	
Audio Output Level		
Line Out	0.8 V (RMS) at 10 kW	
Headphone	0.6 V (RMS) at 32 W	
Cache Buffer	256 KB	
Data Transfer Rate		
	Mode 1	**Mode 2**
Sustained	2062 KB/sec (single)	2368 KB/sec (single)
Burst	4800 KB/sec (32×) 16.7 MB/sec	5512 KB/sec (32×) 16.7 MB/sec
Interface Cable Length (Max)	18 in	
Startup Time	< 7 sec	
Stop Time	< 4 sec	

24× CD Drive

	U. S.	Metric
Dimensions		
Width	5.75 in	14.60 cm
Height	1.67 in	4.29 cm
Depth	8.23 in	20.80 cm
Weight	1.98 lb	0.95 kg
Applicable Disc		
CD-ROM	Mode 1 and Mode 2	
CD-DA	Audio	
CD-XA	Mode 2, Form 1 and 2	
Photo CD	Single and Multiple Session	
Block Size		
CD-ROM Mode 1	2048 bytes	
CD-ROM Mode 2	2340, 2336 bytes	
CD-DA	2352 bytes	
CD-XA	2328 bytes	
Center Hole	15 mm diameter	
Diameter	12 cm, 8 cm	
Thickness	1.2 mm	
Track Pitch	1.6 µm	
Laser		
Beam Divergence	53.5 degrees +/- 1.5 degrees	
Output Power	0.14 mW	
Type	Semiconductor laser GaAIAs	
Wave Length	780 nm +/- 25 nm	
Access Time		
Random	< 85 ms	
Full Stroke	< 150 ms	
Audio Output Level		
Line Out	0.8 V (RMS) at 47 kW	
Headphone	0.6 V (RMS) at 32 W	
Cache Buffer	128 KB	
Data Transfer Rate		
Sustained	150 KB/sec (single)	
Burst	3600 KB/sec (24×) 4.0 MB/sec	
Interface Cable Length (Max)	18 in	
Startup Time	< 7 sec	
Stop Time	< 4 sec	

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

Mouse

Dimensions	*U. S.*	*Metric*
Height	1.22 in	3.1 cm
Length	3.94 in	10 cm
Width	2.21 in	5.6 cm
Weight	2.9 oz	85 g
Base Resolution	400 DPI	
Tracking Speed (maximum)	10 in/sec	25 cm/sec
Temperature		
Operating	32° F to 104° F	0° C to 40° C
Storage	-4° F to 140° F	-20° C to 60° C
Lifetime		
Mechanical	Exceeds 300 miles	Exceeds 483 km
Switch	Exceeds 1 million operations	Exceeds 1 million operations
Relative Humidity	10% to 90%, noncondensing	
ESD	No soft errors through 6 kV; No hard errors through 6 kV; specific performance depends on host system	

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

Fax-modem

	56-DF	56-DFi	HCF
Maximum Data Speed (kbps)	56*	56*	56*
Data	K56Flex, V.34, V.32terbo, V.32bis, V.32, V.22bis, V.22, V.21, Bell 212A, Bell 103	K56Flex, V.34, V.32terbo, V.32bis, V.32, V23, V.22bis, V.22, V.21, Bell 212A, Bell 103	V.90, K56Flex, V.34, V.32terbo, V.32bis, V.32, V.22bis, V.22, V.21, Bell 212A, Bell 103
Error Correction	V.42bis,V.42, LAPM, and MNP 2-5	V.42, LAPM, and MNP 2-4	V.42bis, V.42, LAPM, and MNP 2-5
Fax	V.17 (14.4 kbps transmission speed) V.29, V.27ter, V.21 Channel 2, Class 1 command set, Group III FAX	V.17 (14.4 kbps transmission speed) V.29, V.27ter, V.21 Channel 2, Group III FAX, Class 1 interface	V.17 (14.4 kbps transmission speed) V.29, V.27ter, V.21 Channel 2, Class 1 command set, Group III FAX

* Both K56flex and V.90 are designed only to allow faster downloads from either K56flex or V.90 compliant digital sources. Maximum achievable download transmission rates are currently unknown, may not reach 56kbps, and will vary with line conditions.

System
Power supply
Diskette drive
Hard drives
DVD drive
CD drives
Mouse
Fax/modem
Zip drive

SPECIFICATIONS

Zip Drive

Total formatted capacity (bytes)	100,663,296
Sector size (bytes)	512
Total number of sectors	196,608
Number of reassignable spare sectors	252
Seek times (including settling), ms:	
Average	29
Track-to-track	5
Maximum	55
Average latency, ms	10
Motor speed, rpm	2941±5%
Motor start time, ms	3000
Track density, tpi	2118
Track width, µm	12
Transfer rate, kb/s:	
From diskette	790-1400
Buffer (maximum)	3300

JUMPER & SWITCH INFORMATION - INDEX PAGE

System board

CD drive

DVD drive

Hard drive

Zip drive

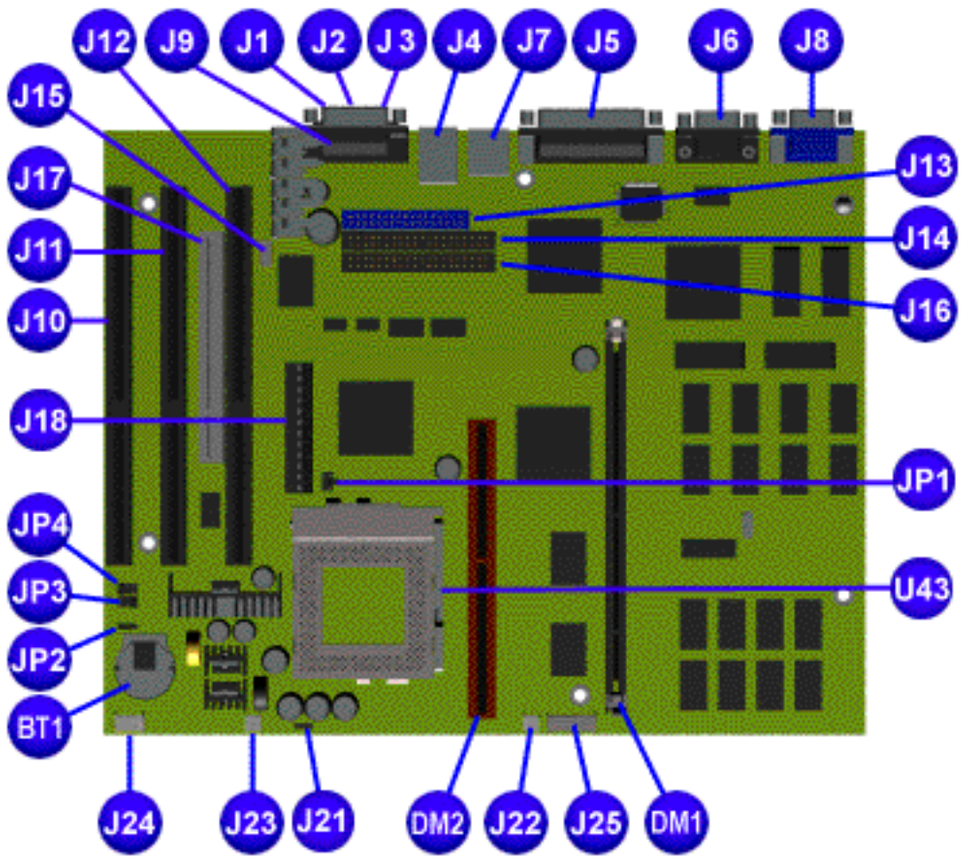
System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

4900 Series System Board

For boards used in the 5000 & 5100 series models, click the link.

Click on a jumper designator to get its function and a connector description.



	Processor frequency required, MHz							
Jumpers	**133**	**166**	**200**	**233**	**266**	**300**	**333**	**366**
Pins 1-2 (BF0)	on	on	off	off	on	on	off	off
Pins 3-4 (BF1)	off	on	on	off	off	on	on	off
Pins 5-6 (BF2)	off	off	off	off	on	on	on	on

Connector information

Function	Description	Reference Designator
Keyboard	Miniature 6-pin	½ J4
Mouse	Miniature 6-pin	½ J4
Parallel port	DSUB 25-pin	J5
Serial	DSUB 15-pin	J6
USB	USB connector	J7
Video	15-pin VGA	J8
Game	DSUB 15-pin	J9 *(Combined stacked connector)*
Microphone in	Mini stereo	J3 *(Combined stacked connector)*
Speaker out	Mini stereo	J1 *(Combined stacked connector)*
Line out	Mini stereo	J2 *(Combined stacked connector)*
DIMM socket	168-pin DIMM	DM1
SODIMM socket	144-pin SODIMM	DM2
PCI slot	32-bit PCI connector	J17
ISA slots	16-bit ISA connector	J10, J11 (combo), J12
CPU core voltage select	6-pin header	JP3 & JP4
Socket 7	321-pin PGA	U43
Socket 7 clock multiplier	6-pin header	JP1
Clear CMOS	3-pin header	JP2
Battery socket	Battery holder	BT1
CD-ROM audio	4-pin header, key 2	J15
IDE drives	40-pin headers, key 20	J14 (primary), J16 (secondary)
Diskette drive	34-pin header	J13
Headphone board	5-pin 2mm connector	J24
Internal speakers	2-pin header	J23 (L), J22 (R)
Second fan	4-pin header, key 2	J21
Reset (NA)	2-pin header	J19
Button board	5-pin header	J25
Power supply	12-pin ATPWR header	J18

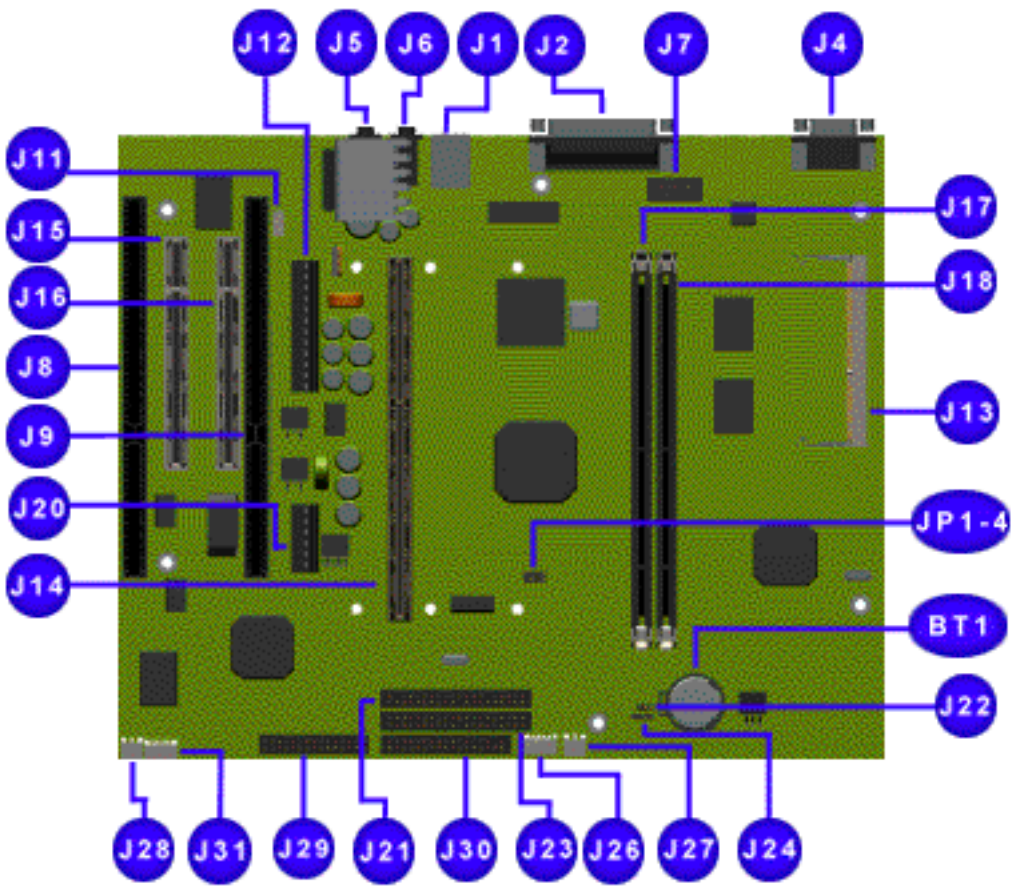
System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

5000 & 5100 Series System Boards (1st board of 3)

To see other boards in the 5000/5100 series, or to see the 4900 series board, click the appropriate link.

Click on a jumper designator to find the jumper function and a connector description.



	Processor frequency required, MHz			
Jumper	**233**	**266**	**300**	**333**
JP1	on	off	on	off
JP2	on	off	off	on
JP3	off	on	on	on
JP4	off	off	off	off

Connector information

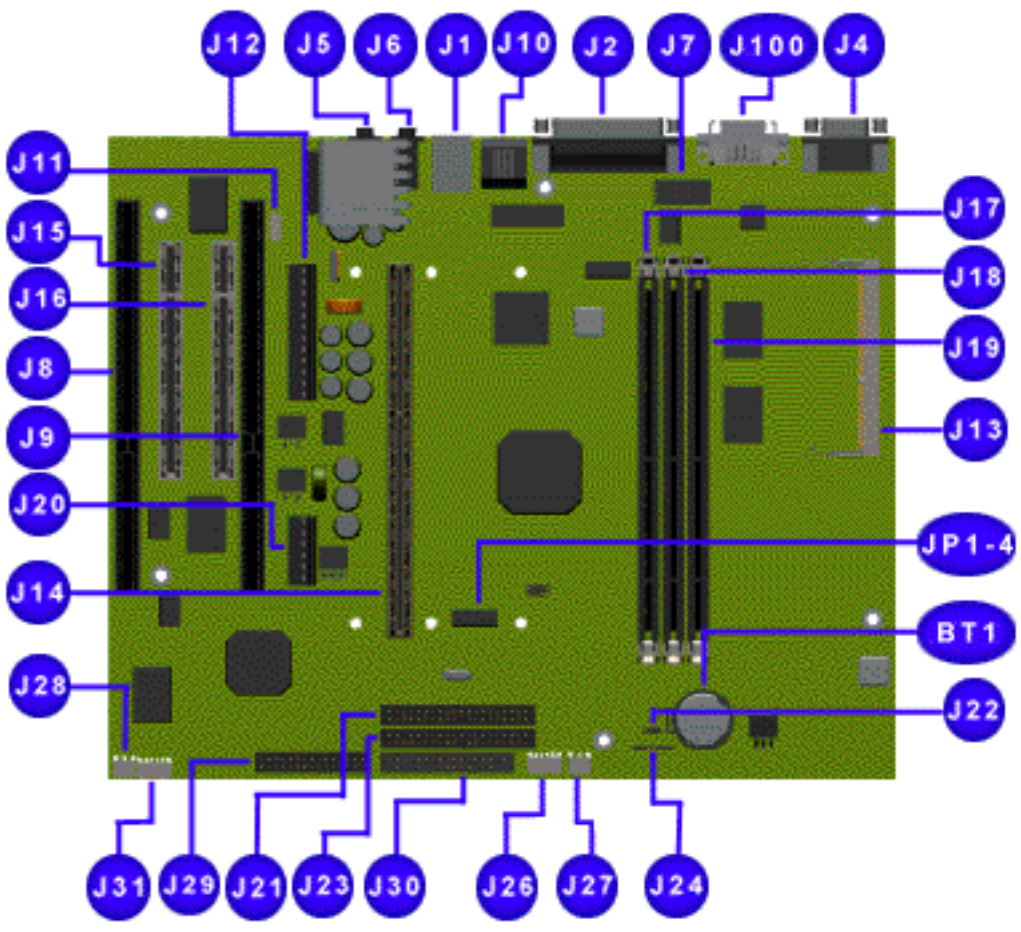
Function	Description	Reference Designator
Keyboard	Miniature 6-pin	½ J1
Mouse	Miniature 6-pin	½ J1
Parallel port	DSUB 25-pin	J2
Video	15-pin VGA	J4
Serial port	DB9	J7
Microphone in	Mini stereo	½ J6
Speaker out	Mini stereo	½ J5
Line in	Mini stereo	½ J6
Line out	Mini stereo	½ J5
DIMM sockets	168-pin DIMM	J17, J18
SODIMM socket	144-pin SODIMM	J13
PCI slots	32-bit PCI connector	J15, J16
ISA slots	16-bit ISA connector	J8, J9
Processor slot	Slot 1 connector	J14
Slot 1 clock multiplier	2-pin header	JP1 -- JP4
Clear CMOS	3-pin header	J22
GamePort/USB	24-pin 2mm connector	J29
Sleep button & LEDs	5-pin 2mm connector	J26
Battery socket	2-pin socket	BT1
CD-ROM audio	4-pin header, key 2	J11
IDE drives	40-pin headers, key 20	J23 (primary), J21 (secondary)
Diskette drive	34-pin header	J30
Headphone board	5-pin 2mm connector	J31
Internal speakers	2-pin header	J27, J28
Second fan	4-pin header, key 2	J24
+3.3V power	6-pin header	J20
Power supply	12-pin ATPWR header	J12

JUMPER & SWITCH INFORMATION

5000 & 5100 Series System Boards (2nd board of 3)

For other boards used in the 4900 series and 5000 & 5100 series, click the appropriate link.

Click on a jumper designator to find the jumper function and connector description.



Two tables are given below: the first is for a 66 MHz bus speed, the other for 100 MHz bus speed.

	Processor frequency required, MHz (for 66MHz bus speed)				
Jumper	200*	233*	266	300	333
JP1	off	on	off	on	off
JP2	on	on	off	off	on
JP3	off	off	on	on	on
JP4	off	off	off	off	off

**Not shipped in these configurations*

For a 100 MHz bus speed:

	Processor frequency required, MHz (for 100 MHz bus speed)				
Jumper	300*	350	400	450	500*
JP1	off	on	off	on	off
JP2	on	on	off	off	on
JP3	off	off	on	on	on
JP4	off	off	off	off	off

**Not shipped in these configurations*

Connector information

Function	Description	Reference Designator
Keyboard	Miniature 6-pin	½ J1
Mouse	Miniature 6-pin	½ J1
Parallel port	DSUB 25-pin	J2
Video	15-pin VGA	J4
Flat panel display	20-pin	J100
Ethernet jack	RJ45	J10
Microphone in	Mini stereo	½ J6
Speaker out	Mini stereo	½ J5
Line in	Mini stereo	½ J6
Line out	Mini stereo	½ J5
DIMM sockets	168-pin DIMM	J17, J18, J19
SODIMM socket	144-pin SODIMM	J13
PCI slots	32-bit PCI connector	J15, J16
ISA slots	16-bit ISA connector	J8, J9
Processor slot	Slot 1 connector	J14
Slot 1 clock multiplier	2-pin header	JP1 -- JP4
Clear CMOS	3-pin header	J22
Serial port	DB9	J7
GamePort/USB	24-pin 2mm connector	J29
Sleep button & LEDs	5-pin 2mm connector	J26
Battery socket	2-pin socket	BT1
CD-ROM audio	4-pin header, key 2	J11
IDE drives	40-pin headers, key 20	J23 (primary), J21 (secondary)
Diskette drive	34-pin header	J30
Headphone board	5-pin 2mm connector	J31
Internal speakers	2-pin header	J27, J28
Second fan	4-pin header, key 2	J24
+3.3V power	6-pin header	J20
Power supply	12-pin ATPWR header	J12

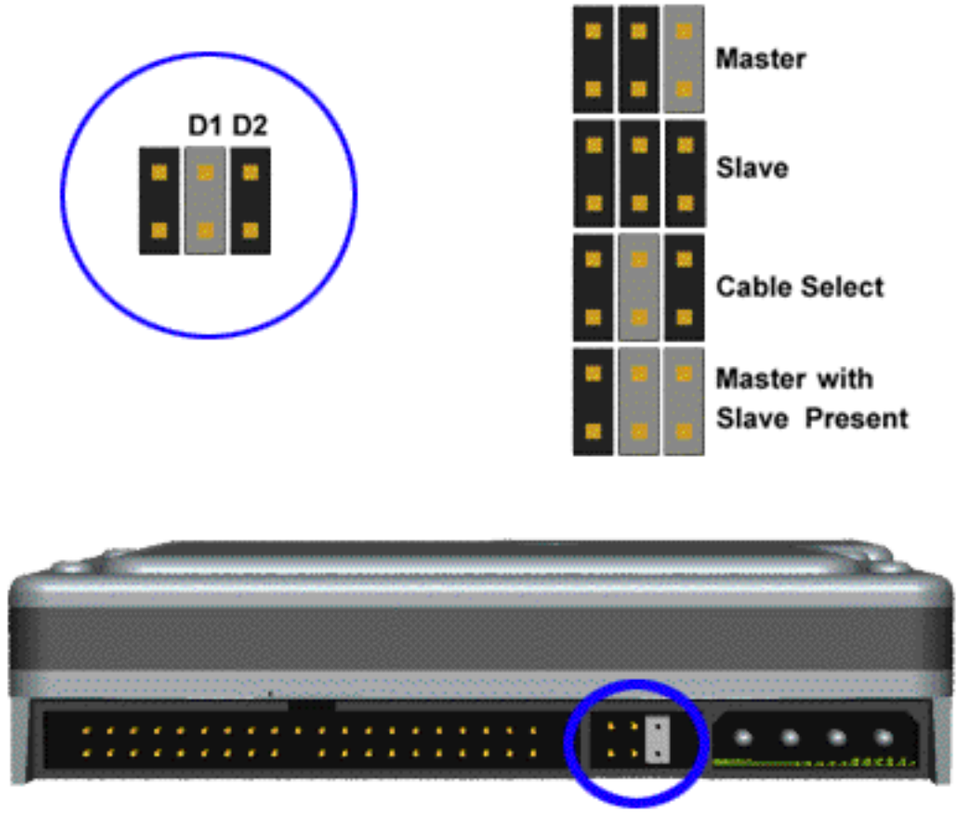
System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

Hard Drives

Compaq Computer Corporation uses IDE hard disk drives that conform to two different device 0/device 1 implementations. These are Conner mode and ATA-compatible mode. These two modes are incompatible with one another.

Seagate jumper settings are shown immediately after this link to **Quantum** hard drive jumper settings

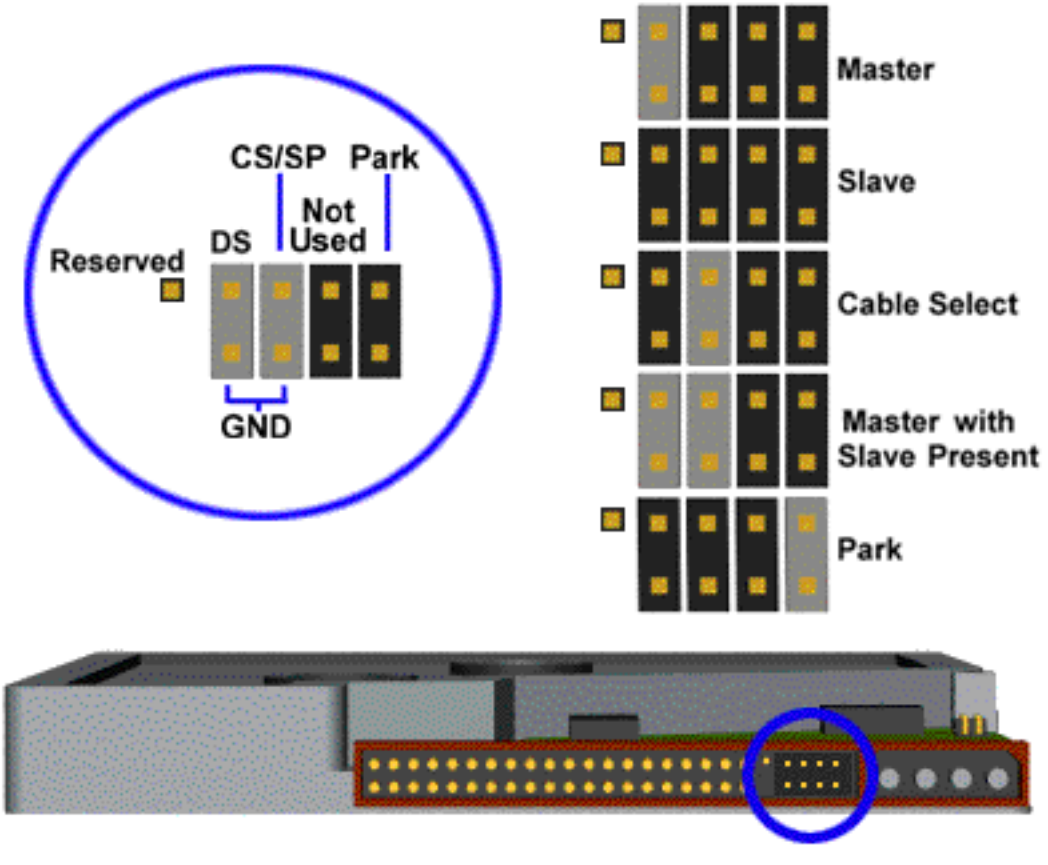


Seagate IDE Hard Drive Jumper Settings

System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

Hard Drive

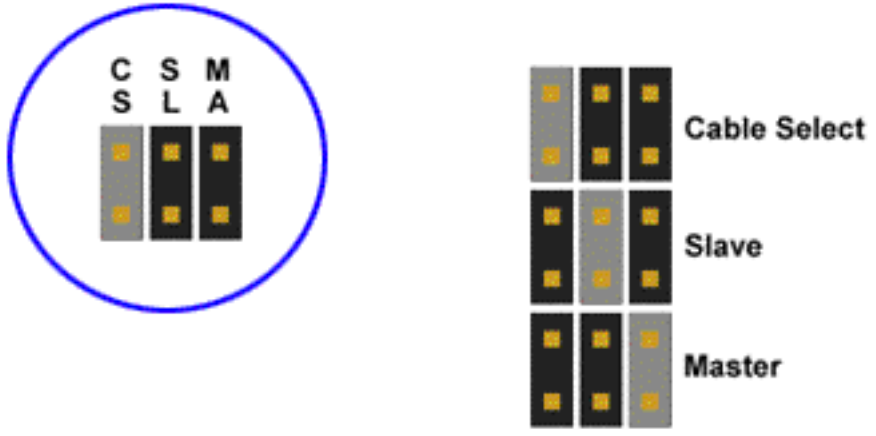


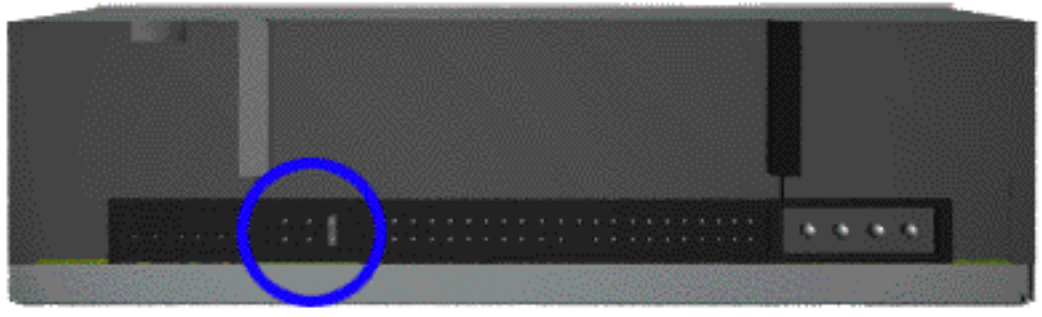
Quantum IDE Hard Drive Jumper Settings

System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

DVD Drive

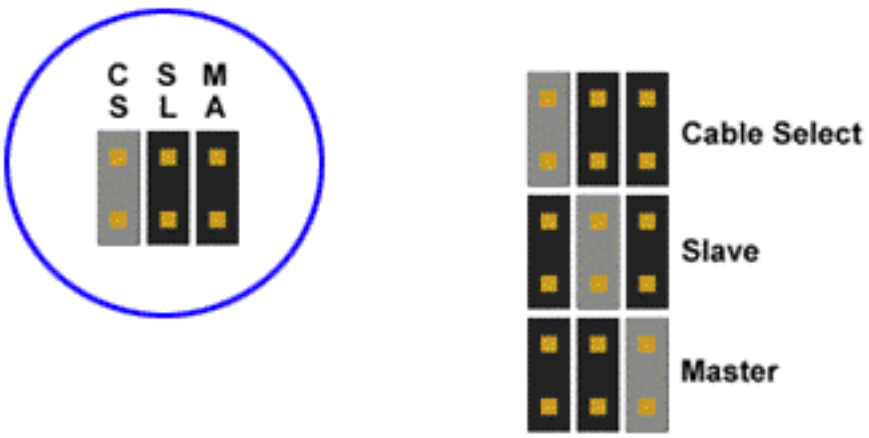


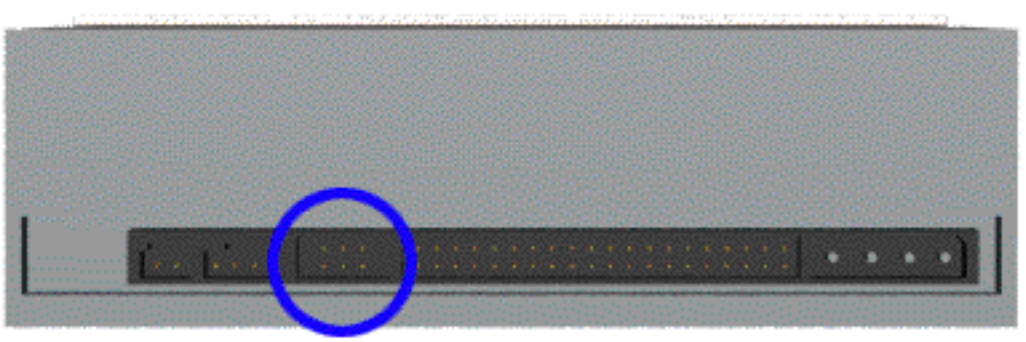


System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

CD Drive

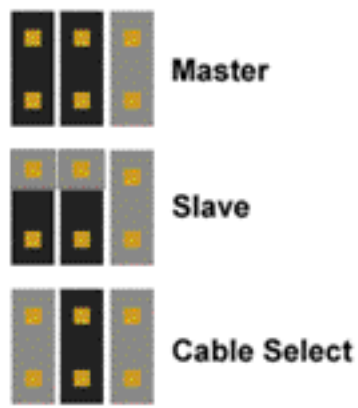


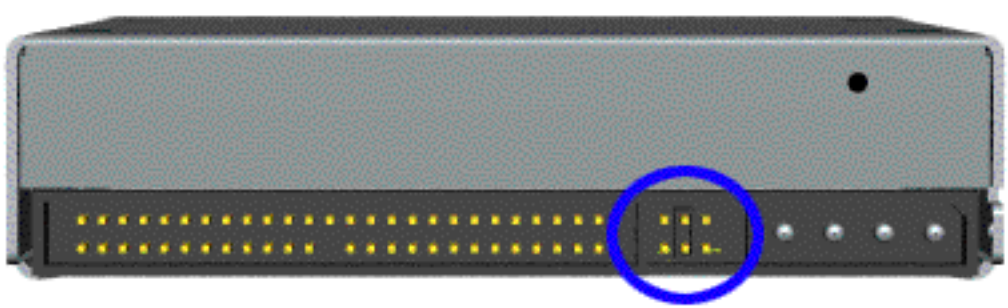


System boards
Hard drives
DVD drive
CD drive
Zip drive

JUMPER & SWITCH INFORMATION

Zip drive





Home | Product Description | Removal & Replacement | Troubleshooting | Jumper & Switch Information | Illustrated Parts Catalog | Specifications

---

SPECIFICATIONS - INDEX PAGE

This section provides physical, environmental, and performance specifications for Compaq 4900, 5000 and 5100 Series Personal Computers.

CD drive
Diskette drive
DVD drive
Fax-modem
Hard drive
Mouse
Power supply
System
Zip drive

Home | Product Description | Removal & Replacement | Troubleshooting | Jumper & Switch Information | Illustrated Parts Catalog | Specifications

---

PRODUCT DESCRIPTION - INDEX PAGE

Models and model-specific features

CPU controls and lights

Keyboard controls and lights

Creativity Action Center

Rear components
- connector pin assignments

Power cord set requirements
- general requirements
- country-specific requirements

Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

Models and Model-Specific Features

NOTE:

- All models are configured with 2MB 100MHz SGRAM video memory except the 5035 and some 5170 and 5180 models, which have 4MB.
- All models except 5034ES are supplied with 56kbps modems.

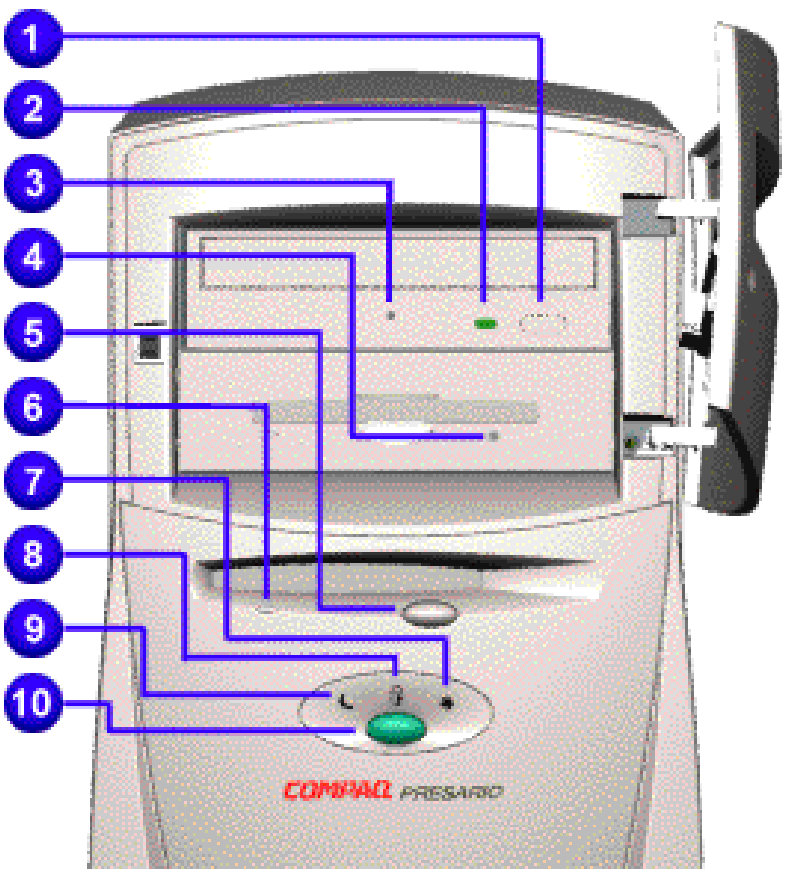
Compaq Presario 4900, 5000 and 5100 Series Personal Computers Standard Configurations

	Model	Processor (MHz)	Cache (kB)	Hard Drive (GB)	SDRAM (MB)	CD (or DVD)	Zip drive
U.S., Latin America, Canada	4910	K6 266	256	6.0	48	24x	---
	5010	CII 266	-----	6.0	48	32x	---
Europe, Middle East, Africa	5010	CII 266	-----	3.2	48	32x	---
	5020	CII 300	-----	3.2	32, 48	32x	---
Japan	5010	CII 266	-----	4.0	64	32x	---
	5030	PII 300	512	4.0	64	DVD2	---
Asia/Pacific	5010	CII 266	-----	3.2	48	32x	---
	5020	CII 300	-----	3.2	48	32x	---

Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

CPU Controls and Lights



1 CD/DVD load/eject button

2 CD/DVD drive activity light

3 Manual eject slot

4 Zip drive eject button & activity light

5 Floppy diskette eject button

6 Floppy drive activity light

7 Power status light

8 Drive activity light

9 Sleep status light

10 Instant on button

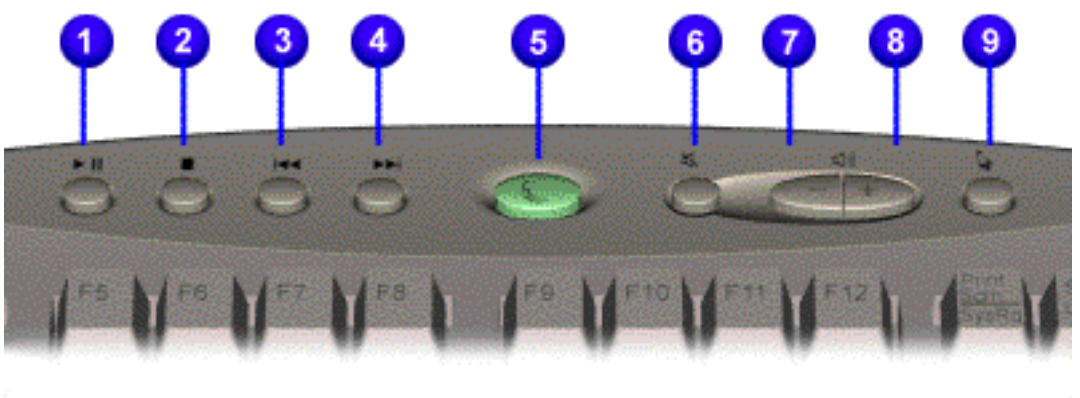
Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

Keyboard Controls and Lights

Easy Access Internet Keyboard (click here for **Space Saver keyboard**)

Top center (click here for **keyboard top right corner** assignments)

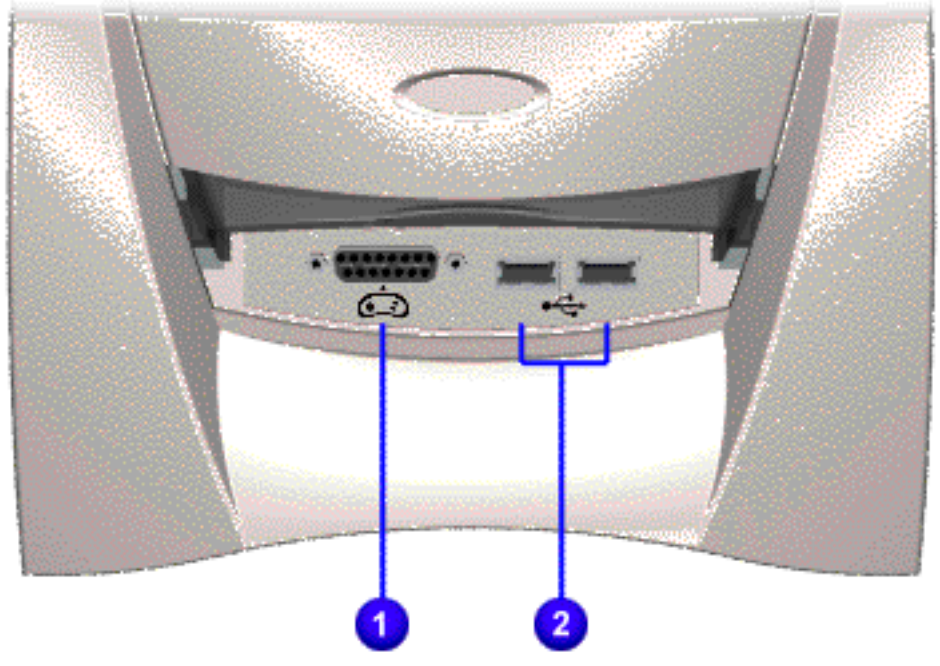


1 Play/pause
2 Stop
3 Previous track
4 Next track
5 Sleep button
6 Mute
7 Volume down
8 Volume up
9 Favorite application launch

Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

Creativity Action Center (5000 and 5100 models only)



1 Gamepad/joystick port

2 USB ports

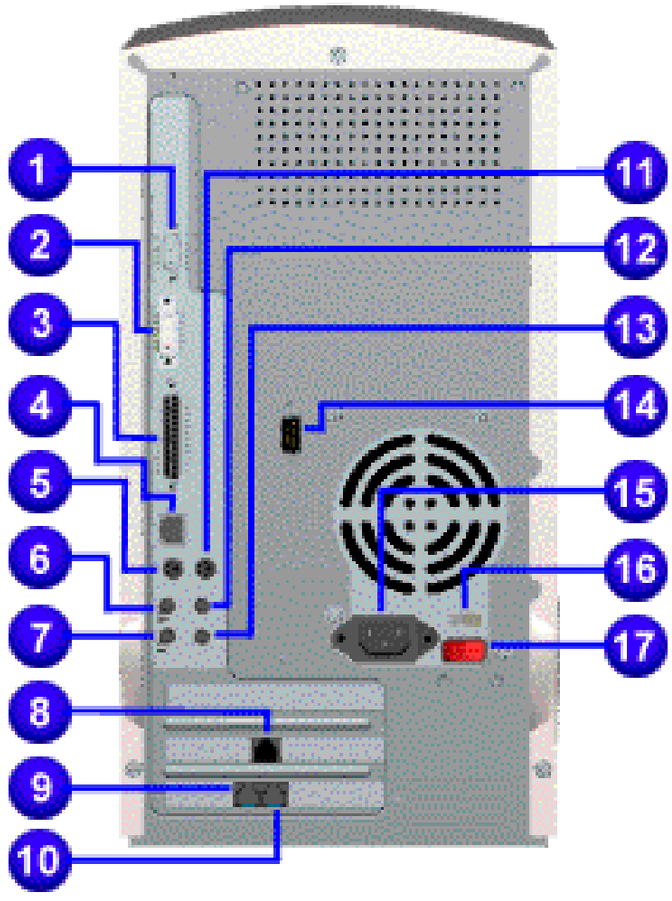
Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
CPU rear connectors
Power cord set requirements

PRODUCT DESCRIPTION

CPU Rear Connectors

This page is for 5000 and 5100 Series models. For the 4900 Series rear connectors, click the link.

Click here to jump to connector pin assignments.



1 VGA monitor

2 Flat-panel monitor (select models)

3 Parallel (printer) port

4 Integrated NIC △ (select models)

5 Keyboard

6 Microphone in

7 Speaker or headphone out

8 Ethernet network card △ (ES models)

9 Telephone line to wall outlet (select models)

10 Telephone line to telephone △

11 Mouse

12 Audio line in

13 Audio line out

14 Serial port

15 AC

16 Voltage select switch

17 Main power on/off

△ **CAUTION:** Do not plug a phone line into the network connector or you may damage the computer

Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

Power Cord Set Requirements

The auto-detect feature on the computer permits it to operate from any line voltage between 120 and 240 volts AC.

The power cord set (flexible cord and wall plug) received with the computer meets the requirements for use in the country where the computer was purchased.

Power cord sets for use in other countries must meet the requirements of the country where you use the computer. For more information on power cord set requirements, contact your Compaq authorized dealer, reseller, or service provider.

General Requirements

The requirements listed below are applicable to all countries:

1. The length of the power cord set must be at least 6.00 feet (1.8 m) and a maximum of 9.75 feet (3.0 m).
2. All power cord sets must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be used.
3. The power cord set must have a minimum current capacity of 10A and a nominal voltage rating of 125 or 250 volts AC, as required by each country's power system.
4. The appliance coupler must meet the mechanical configuration of an EN 60 320/IEC 320 Standard Sheet C13 connector, for mating with appliance inlet on the Switch Box.

Country-Specific Requirements

Country	Accredited Agency	Country	Accredited Agency
Australia	EANSW*	Italy	IMQ*
Austria	OVE*	Japan	JIS***
Belgium	CEBC*	Norway	NEMKO*
Canada	CSA**	Sweden	SEMKO*
Denmark	DEMKO*	Switzerland	SEV*
Finland	SETI*	United Kingdom	BSI*
France	UTE*	United States	UL**
Germany	VDE*		

* The flexible cord must be <HAR> Type HO3VV-F, 3-conductor, 1.0 mm2 conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.

** The flexible cord must be Type SJT-2 or equivalent, No. 18 AWG, 3-conductor. The wall plug must be a two-pole grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15A, 250V) configuration.

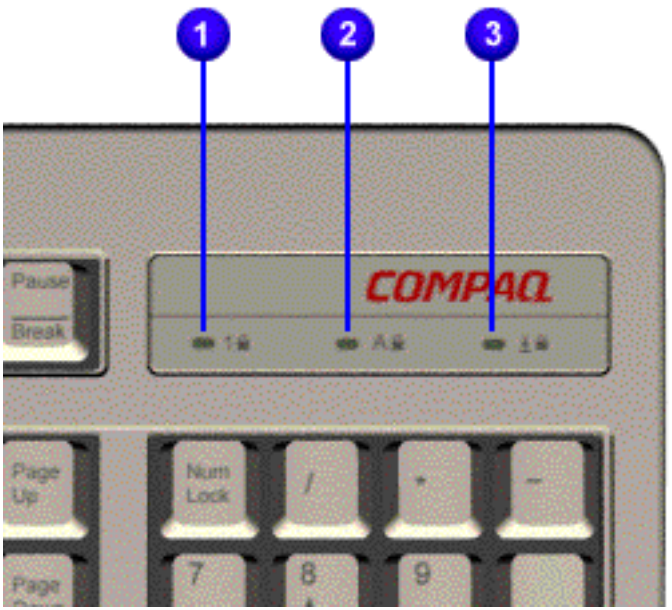
*** The appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. Flexible cord must be Type VCT or VCTF, 3-conductor, 0.75mm2 conductor size. The wall plug must be a two-pole type with a Japanese Industrial Standard C8303 (15A, 125V) configuration.

Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

Keyboard Controls and Lights

Space Saver Keyboard



1 Num Lock Light

2 Caps Lock Light

3 Scroll Lock Light

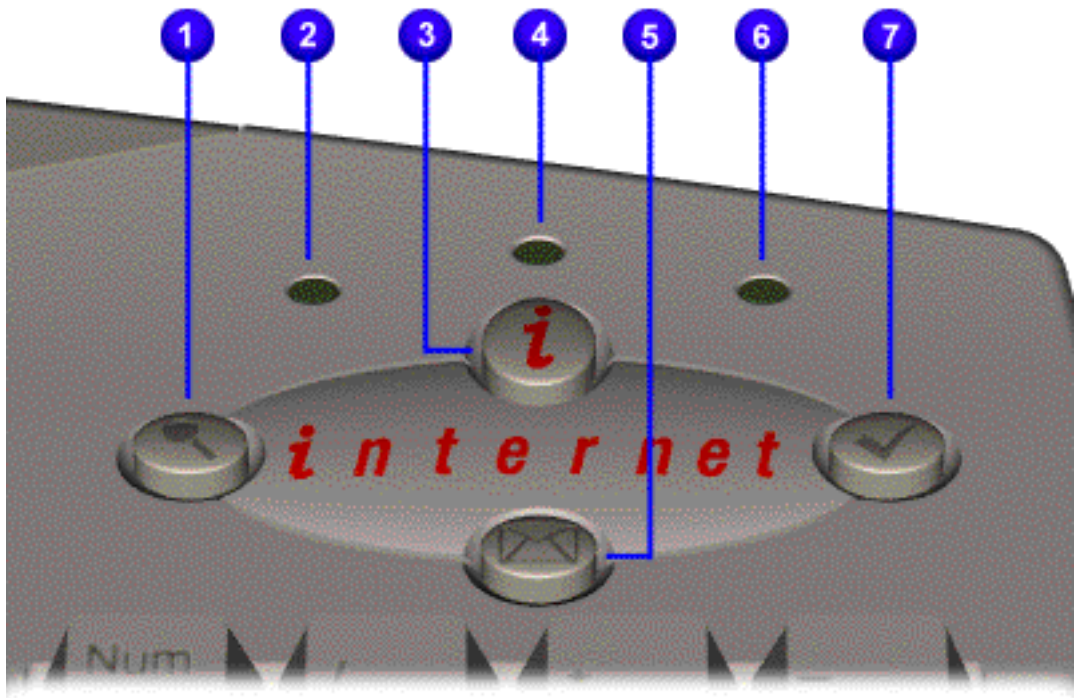
Models and features
CPU controls and lights
Keyboard controls and lights
Creativity Action Center
Rear CPU connectors
Power cord set requirements

PRODUCT DESCRIPTION

Keyboard Controls and Lights

Easy Access Internet Keyboard

Upper right corner



1. Instant search
2. Num lock light
3. Instant Internet
4. Caps lock light
5. Instant e-mail
6. Scroll lock light
7. Featured Web site

ILLUSTRATED PARTS CATALOG - INDEX PAGE

NOTE:	The computer serial number should be provided to Compaq whenever requesting information or ordering spare parts.

System unit

Mass storage devices

Cables

Standard & optional boards:
4900 series 5000 & 5100 series

Fax/modem

Keyboards

Monitors

Miscellaneous parts

Return kits

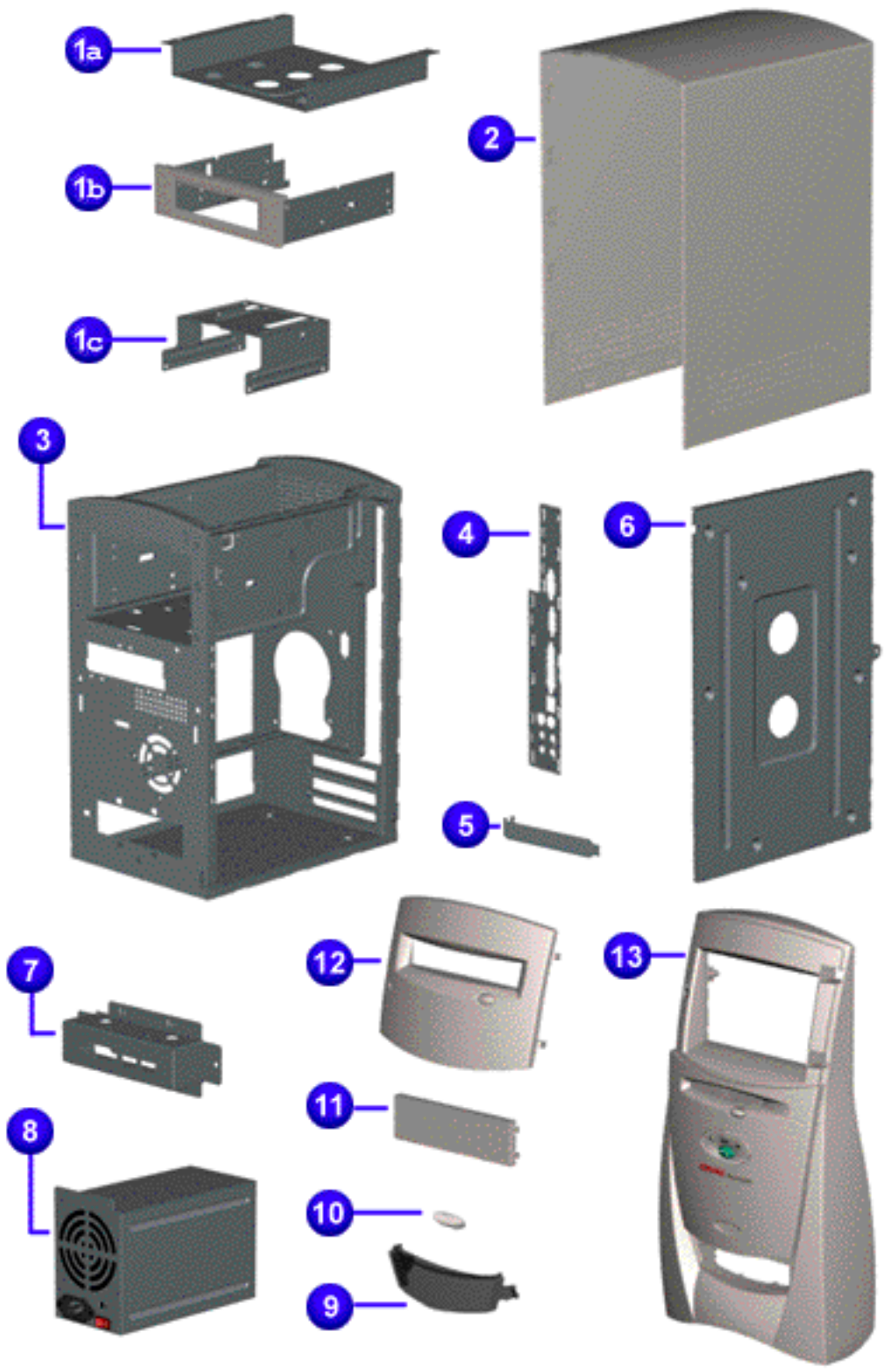
Documentation & software

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

System Unit

Click on a part to get its description and spare part number.

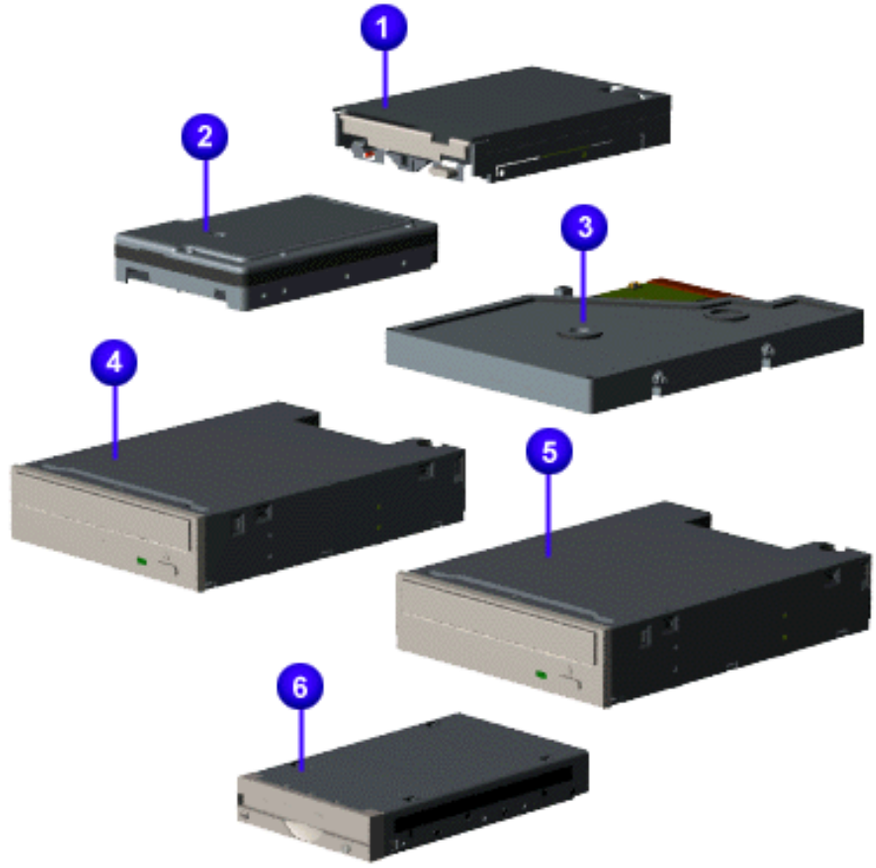


	Description	Spare Part Number
1	**Storage Device Bracket Kit** *1a* 3.5-Inch Hard Drive Bracket *1b* Secondary Drive Bracket *1c* Diskette Drive Bracket	304234-001
2	Hood	304227-001
3	Chassis	317214-001
4	I/O Panel and Label	170725-001
5	Option Slot Cover (5 each)	304284-001
6	System Board Bracket	spared with chassis
7	Creativity Action Center Bracket	spared with storage device bracket kit
8	Power Supply Assembly	319235-001
9	Creativity Action Center Cover	part of front bezel assembly
10	**Logo Kit** *10a* North America, Latin America, Asia/Pacific *10b* Europe, Middle East, Africa	320658-001 320672-001
11	Drive Bay Bezel	170717-001
12	CD/DVD & Zip Drive Access Door	320671-001
13	Front Bezel Kit	320660-001
	Button Board with Bracket	320664-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Mass Storage Devices

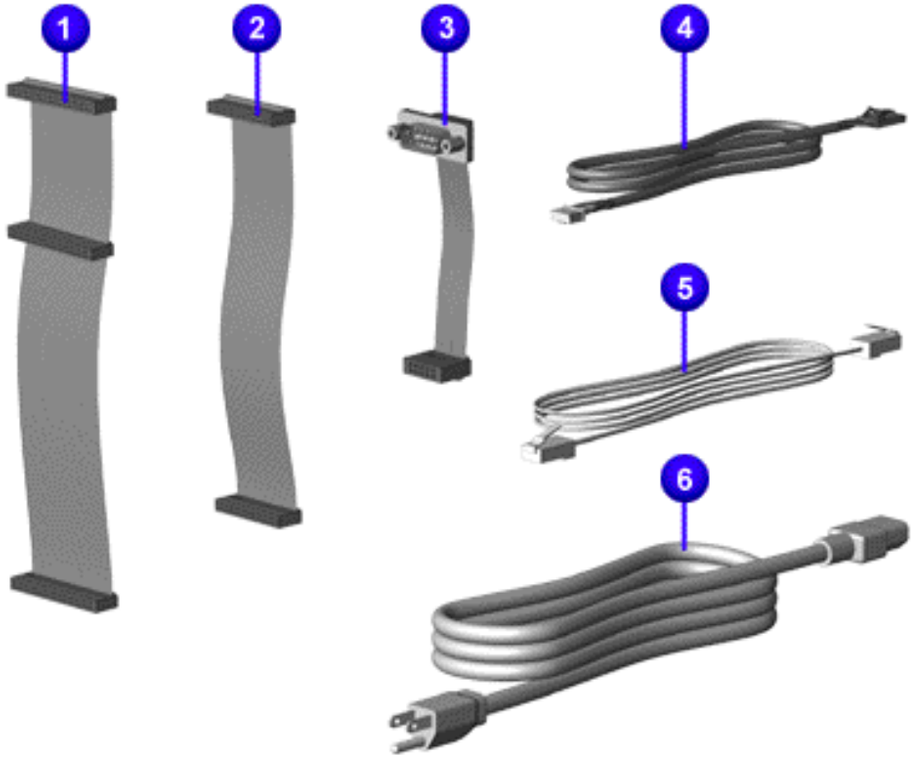


	Description	Spare Part Number
1	1.44-MB, 3.5" Diskette Drive	304235-001
2	3.5" Hard Drive	
	3.2 GB	286538-001
	4.0 GB	320648-001
	6.0 GB	298463-001
	8.0 GB	298464-001
	10.0 GB	320662-001
	12.0 GB	298465-001
3	5" Hard Drive	same as for 3.5" hard drive
4	CD Drive	
	32x	317212-001
	24x	317211-001
5	DVD2 drive	317213-001
	DVD3 drive	327446-001
6	Zip drive	
	IDE (Ivory)	270946-001
	IDE (Grey)	270946-601
	ATAPI (Ivory)	328934-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Cables



Description	Spare Part Number
Cable kit (contains 1-4)	320663-001
1 CD Drive	
2 Diskette Drive, Hard Drive	
3 Serial	
4 CD Audio	
5 Fax/modem cable	
Click on the arrow or box for a list of the spare part numbers	
Asia/Pacific 165224-001	
6 Power cord	
Click on the arrow or box for a list of the spare part numbers	
Australia 238472-005	

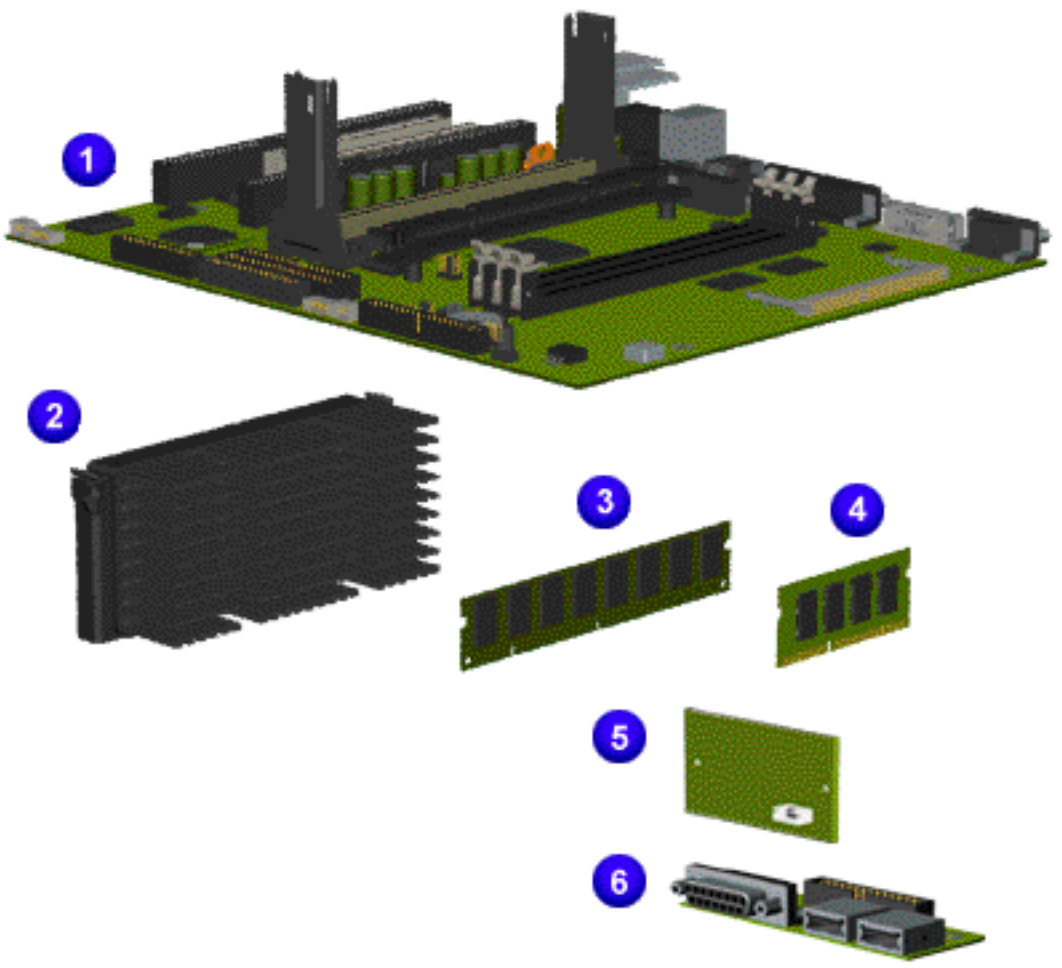
System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Standard and Optional Boards

5000/5100 Series (3rd board of 3)

To see the 4900 series board or other 5000/5100 series boards, click the appropriate link.



	Description	Spare Part Number
1	System Board -- with NIC -- without NIC	 320757-001 329090-001
2	Pentium II Processor	
	-- 450 MHz	327585-001
	-- 400 MHz	327584-001
	-- 350 MHz	327583-001
	-- 333 MHz	320666-001
	-- 300 MHz	320647-001
	-- 266 MHz	297327-002
3	100 MHz SDRAM DIMM Memory Module	
	-- 64 MB	320670-001
	-- 48 MB	320673-001
	-- 32 MB	319326-001
4	SyncGraphics Video Memory Module (SODIMM)	
	-- 4 MB	327591-001
	-- 2 MB	170719-001
5	Button board with bracket	320664-001
6	USB module	330642-001

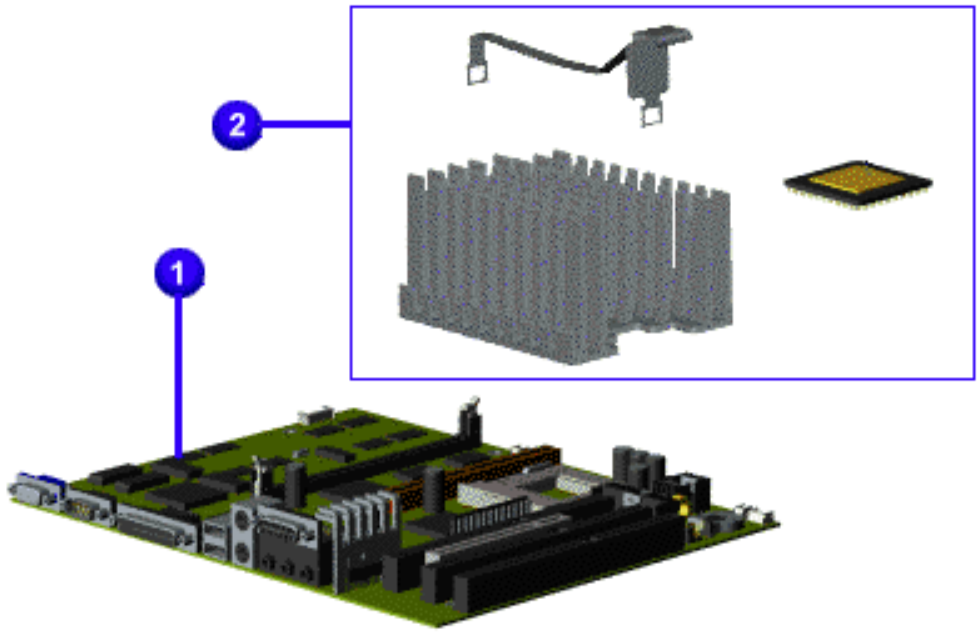
System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Standard and Optional Boards

4900 Series

To see boards for the 5000/5100 series computers, click on the link.



	Description	Spare Part Number
1	System Board	319208-001
2	Processor kit (Clip, heat sink, 266 MHz AMD K6 processor)	320646-001
	Not shown:	
	512k cache	243117-002
	256k cache	243117-002
	1MB video memory	327265-001
	SDRAM - 32MB	319326-001
	16MB	278066-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

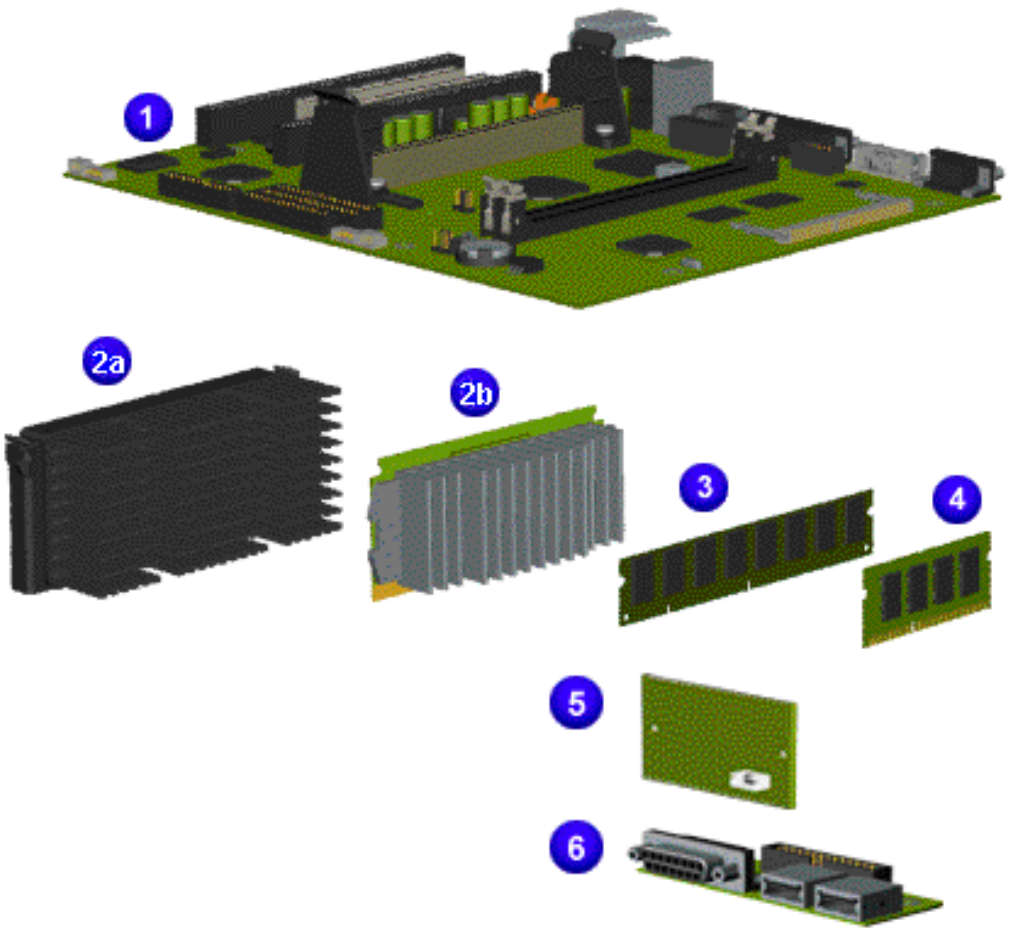
ILLUSTRATED PARTS CATALOG

Standard and Optional Boards

5000/5100 Series (1st board of 3)

To see other boards for the 5000/5100 series and 4900 series computers, click on these links.

Either a Celeron or a Pentium II processor is provided as standard on this board.



	Description	Spare Part Number
1	System Board	
	-- with NIC and FP monitor connectors	329089-001
	-- without NIC or FP monitor connectors, with 4MB memory on-board	330641-001
	-- with 2MB memory on-board	381338-001
2	Processor	
	2a: Pentium II	
	300 MHz	328413-001
	266-MHz	332858-001
	2b: Celeron	
	333 MHz	330648-001
	300 MHz	341718-001
	266 MHz	341719-001
3	66-MHz SDRAM DIMM Memory Module	
	64 MB	320669-001
	48 MB	320673-001
	32 MB	341717-001
	16 MB	278066-001
4	SyncGraphics Video Memory Module (SODIMM)	
	2-MB	170719-001
5	Button board with bracket	320664-001
6	USB module	330642-001

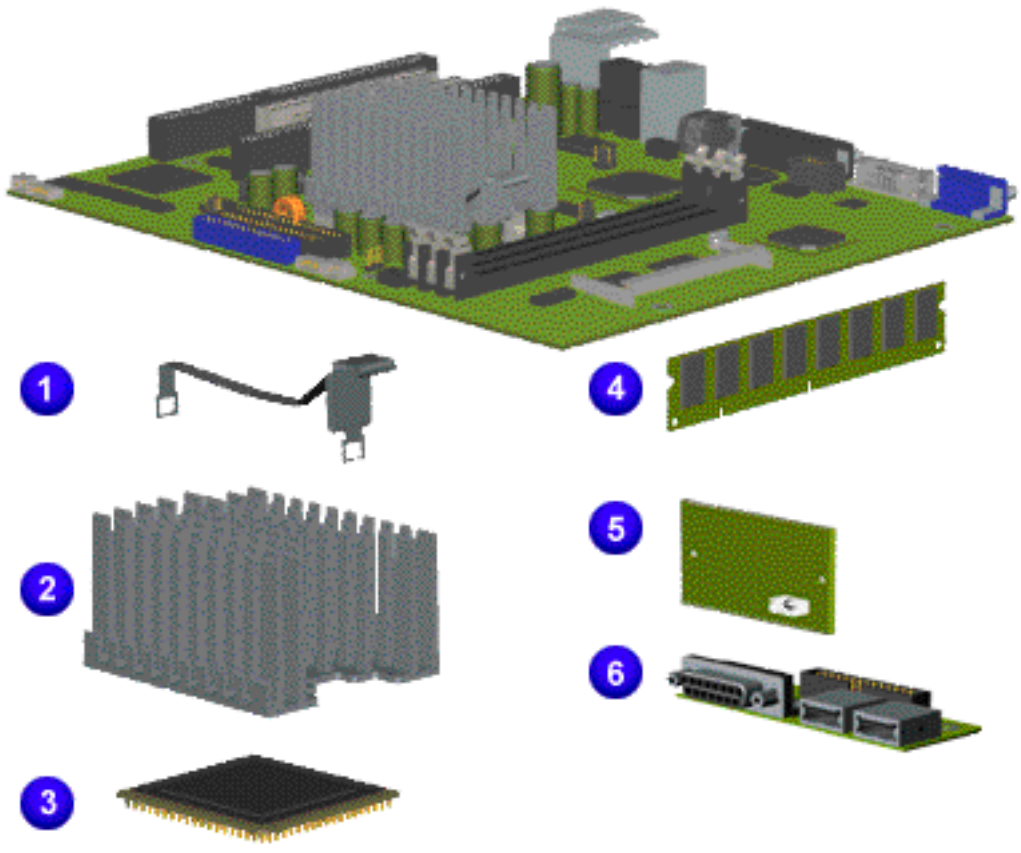
System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Standard and Optional Boards

5000/5100 Series (2nd board of 3)

Click these links to boards for the 4900 series and other boards in the 5000/5100 series computers.



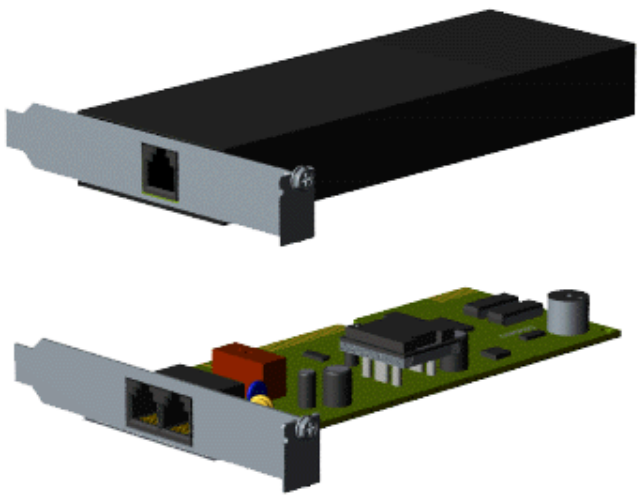
	Description	Spare Part Number
	System Board	
	-- without NIC or flat-panel connectors	386021-001
	-- with NIC & FP	320645-001
1	Heat sink clip	spared with processor
2	Heat sink	spared with processor
3	AMD K6-2 Processor	
	-- 400 MHz	320668-001
	-- 350 MHz	328966-001
	-- 333 MHz	337364-001
4	100 MHz SDRAM DIMM Memory Module	
	-- 64 MB	320670-001
	-- 48 MB	278066-001
5	Button board with bracket	320664-001
6	USB module	330642-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Fax-modem

Two examples of the types of modem used are shown. Your modem may differ slightly from those illustrated.



Description	Spare Part Number
Diamond SupraExpress 56i Pro fax/modem (Spain, Portugal)	317296-001
Compaq 56K-DFi ISA controllerless fax/modem (Europe, Asia/Pacific)	317296-001
Rockwell HCF 56K DataFax PCI fax-modem (North America, Latin America, Japan)	317296-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Keyboards

	Description	Spare Part Number
1	Space-saver keyboard (for US Educational units only)	304242-001
2	Easy Access Internet Keyboard	340869-xxx. Click on the box to determine xxx for a particular location.

Asia/Pacific 283

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Monitors

Click on the picture of the monitor you have to see its catalog information.

	Description	Spare Part Number
1	**Compaq FP500**, TFT	340615-001
	(speakers not shown)	
	Speaker brackets (not shown)	341043-001
	Back leg	341044-001
2	**Compaq Presario MV** monitors	
	(speakers not shown)	
	MV400	
	North America	326902-001
	Northern Hemisphere	326902-022
	Southern Hemisphere	326902-B34
	MV500	
	Northern Hemisphere	340707-001
	TCO95	340707-026
	Southern Hemisphere	340707-B34
	MV700	
	Northern Hemisphere	340708-001
	EMEA	340708-026
	Southern Hemisphere	340708-B34
3	**Compaq Presario 1525**	
	Northern Hemisphere, MPR	241504-002
	Northern Hemisphere, POL	241504-005
	Southern Hemisphere, MPR	241504-003
	North America, POL	241504-001
	Compaq Presario 1725	
	Northern Hemisphere, MPR	241507-002
	Northern Hemisphere, POL	241507-005
	Southern Hemisphere, MPR	241507-003
	North America, POL	241507-001
	Attachable speakers (shown on 3)	320426-001
	Monitor audio cable (not shown)	268244-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

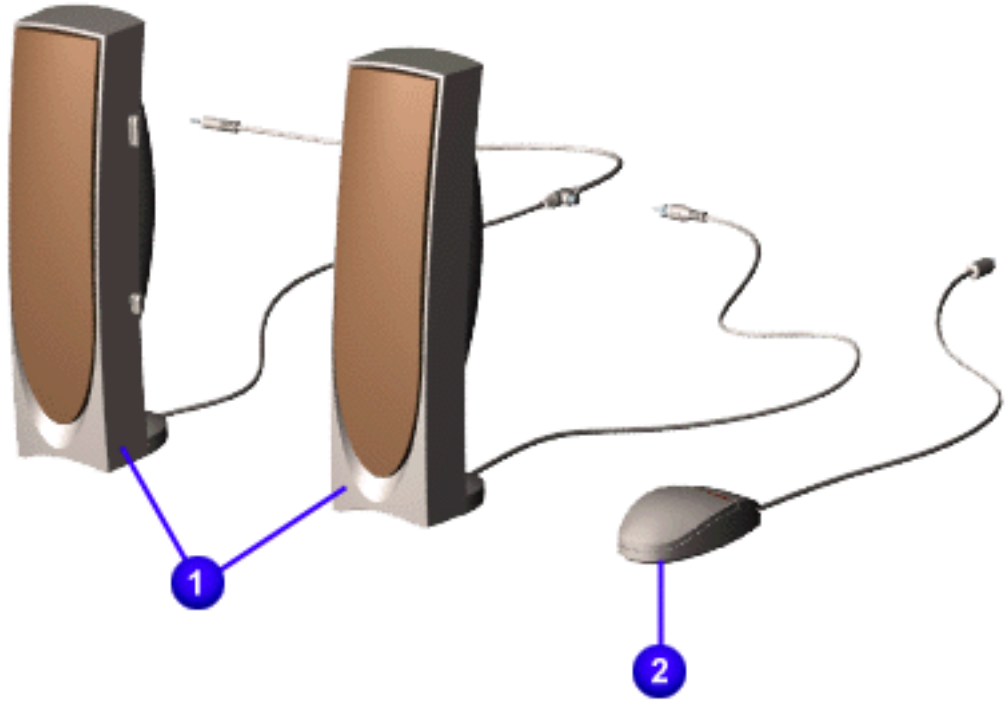
Return Kits

Description	Spare Part Number
Return kit	320661-001
Carton and buns	320662-001
Return kit with packing, Compaq Presario V510 monitor	295627-001
Return kit with packing, Compaq Presario V410 monitor	210545-001
Return kit with packing, Compaq Presario 1525 monitor	241513-001
Return kit with packing, Compaq Presario 1725 monitor	241514-001
Return kit with packing, Compaq Presario MV400 monitor	341082-001
Return kit with packing, Compaq Presario MV500 monitor	341083-001
Return kit with packing, Compaq Presario MV700 monitor	341084-001
Return kit with packing, Compaq Presario FP500 monitor	341139-001
Return kit (Compaq Presario 1525 monitor), 5 each	241517-001
Return kit (Compaq Presario 1725 monitor), 5 each	241518-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Miscellaneous Parts



	Description	Spare Part Number
1	Speakers	304241-001
2	Mouse	199181-401

Not shown:

Pentium II processor, heat sink and clip kit	317216-001
Miscellaneous plastics kit	320667-001
Miscellaneous hardware kit	320649-001

System unit
Mass storage devices
Cables
Standard & optional boards
Fax/modem
Keyboards
Monitors
Miscellaneous
Return kits
Documentation & software

ILLUSTRATED PARTS CATALOG

Documentation & Software

Description	Spare Part Number	
Manual Kit	320659-001	
Manual Kit, Brazilian Portuguese	320659-201	
Manual Kit, Latin American Spanish	320659-161	
QuickRestore Kit, 5000 Series	**Windows 98**	**Windows 95**
Belgium	320890-381	320883-381
Brazil	320890-201	320883-201
Denmark	320890-081	320883-081
France	320890-051	320883-051
Germany*	320890-041	320883-041
Italy	320890-161	320883-161
Norway	320890-091	320883-091
Netherlands	320890-331	320883-331
Spain	320890-071	320883-071
Sweden	320890-101	320883-101
Switzerland	320890-311	320883-311
UK	320890-031	320883-031
QuickRestore Kit, 5100 Series	**Windows 98**	**Windows 95**
Belgium	320892-381	320891-381
Brazil	320892-201	320891-201
Denmark	320892-081	320891-081
France	320892-051	320891-051
Germany	320892-041	320891-041
Italy	320892-161	320891-161
Norway	320892-091	320891-091
Netherlands	320892-331	320891-331
Spain	320892-071	320891-071
Sweden	320892-101	320891-101
Switzerland	320892-311	320891-311
UK	320892-031	320891-031
Quick Reference Guide (1 each)	162212-001	
Quick Reference Guide (5 pack)	106854-001	
Quick Reference Guide (1 each, quarterly subscription)	184960-001	
Quick Reference Guide (5 pack, quarterly subscription)	184961-001	
QuickFind for Windows, North America, Latin America, Asia/Pacific	137906-0xx**	
QuickFind for Windows, Europe, Middle East, Africa	137907-0xx**	

* The 5030 Model for Germany uses either Quick Restore Kit 341714-041 (for Windows 95) or 341715-041 (for Windows 98).

**QuickFind is updated monthly. To complete the QuickFind part number, add the suffix from the table below for the desired month. If you do not specify the 3-digit suffix, the default is the current month in which the order is placed.

Suffix	Month	Suffix	Month	Suffix	Month	Suffix	Month
-001	January	-004	April	-007	July	-010	October
-002	February	-005	May	-008	August	-011	November
-003	March	-006	June	-009	September	-012	December